

Sixty-Fourth Annual Report  
of the  
Director of Public Health  
for the Government of Bombay.

*For the Year 1927*

With Appendices  
including the  
Annual Reports of the Health Officers of the  
Ports of Bombay, Karachi and Aden

[Price—Re. 1 As. 3 or 2s.]

BOMBAY  
PRINTED AT THE GOVERNMENT CENTRAL PRESS  
1928

Obtainable from the Superintendent of Government Printing and Stationery,  
Bombay; from the High Commissioner for India, 42 Grosvenor Gardens,  
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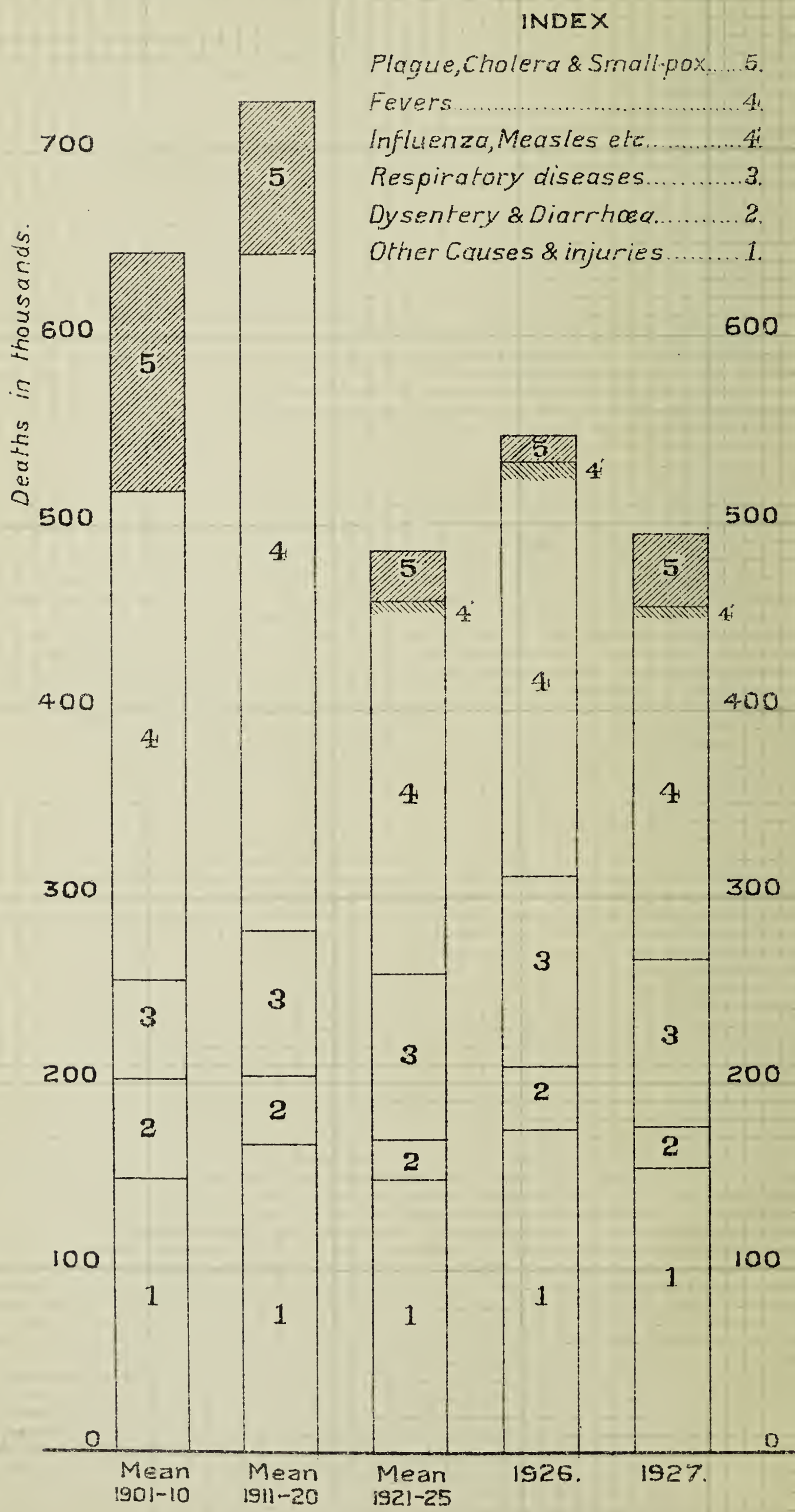
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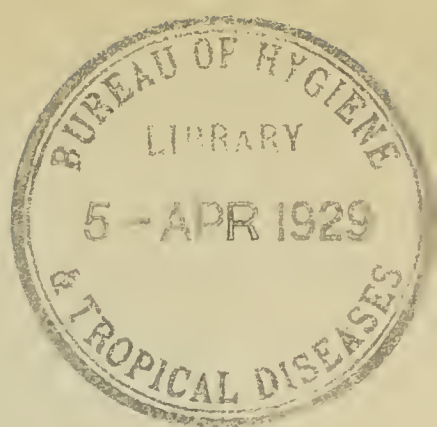


# Chart I.

## DEATHS in 1927 and PREVIOUS YEARS.







# ANNUAL SANITARY REPORT, 1927

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## SECTIONS I to IV—No Remarks

### SECTION V

#### GENERAL POPULATION AND VITAL STATISTICS

*Note.*—The birth and death ratios are calculated on the census population of 1921 :—Europeans 19,247 ; Anglo-Indians 10,221 ; Indians 19,165,614 ; total population of the Bombay Presidency—19,195,082.

1. *Europeans.*—Two hundred and forty-eight births and 172 deaths were recorded against 246 and 203 in 1926 equal to a birth-rate of 12·88 per mille against 12·78 in 1926, and a death-rate of 8·94 against 10·55. This fall is chiefly due to a drop from 102 to 68 in male deaths in Bombay City where 59 per cent. of all the Europeans in the Presidency reside.

Of the births, 112 were males and 136 females against 143 and 103 in 1926 while there were 103 male deaths and 69 female against 133 and 70. Of the deaths, two were due to cholera, 2 to small-pox, 15 to fevers, 13 to dysentery and diarrhœa, 33 to respiratory diseases, 9 to injuries and 98 to all other causes as compared with nil, 3, 29, 25, 23, 9 and 114, respectively, in the previous year.

As stated above, Bombay City shows a fall in mortality among Europeans—68 male and 51 female deaths against 102 and 49 respectively, in 1926.

2. *Anglo-Indians.*—Three hundred and twenty-nine births and 186 deaths were registered against 288 and 250 respectively, in 1926. The birth and death ratios per mille for the year were, therefore, 32·19 and 18·20 respectively, compared with 28·18 and 24·46 in 1926. Of the births, 164 were males and 165 females against 159 and 129 in 1926 while of the deaths 103 were males and 83 females against 129 and 121 in the previous year. Of the 186 deaths, 4 were due to injuries, 22 to fevers, 23 to dysentery and diarrhœa, 50 to respiratory diseases and 86 to all other causes, against 8, 40, 38, 61 and 102 respectively, in 1926. As regards epidemic diseases, one death was recorded from cholera, but none from Small-pox.

As in the case of Europeans, the decrease in the number of deaths occurred chiefly in Bombay City where 73 male and 57 female deaths were recorded against 98 and 85 respectively, in 1926. Fevers caused 15 deaths, dysentery and diarrhœa 20, respiratory diseases 38 and all other causes 56 against 32, 27, 47 and 70 respectively, in the previous year. There was a marked decrease, therefore, under all headings.

3. *Registration areas and Indian Civil population.*—The Presidency is divided into 5 Registration Districts comprising 28 Collectorates (including Bombay City), 250 Rural Circles (Taluka and Mahal), 106 Town Circles and 9 Cantonments. Seven Cantonments in Native States also submit returns to this Department. These divisions are shown in Appendix III to this Report.



According to the 1921 Census, the Indian population of the Presidency including Sind (19,165,614) was distributed as follows:—Rural Circles 15,421,829; Town Circles 3,663,048; Cantonments in British Territory 80,737; and Cantonments in Native States 111,391 persons.

### *Births*

4. With the exception of 1926, the year under report shows the highest number of births recorded since 1916. The total number of births registered was 706,285, showing a slight decrease of 3,850 over the figures for 1926 but an increase of 62,001 on the decennial mean figure—644,284. The number of births recorded in previous years and the corresponding birth-rates are as follows:—

Year	Births	Birth-rate	Year	Births	Birth-rate
1901-1910 mean ..	617,736	33·42	1919 ..	546,460	27·90
1911 ..	705,090	36·00	1920 ..	593,175	30·28
1912 ..	684,890	34·97	1921 ..	624,640	32·59
1913 ..	684,803	34·96	1922 ..	620,770	32·39
1914 ..	733,076	37·43	1923 ..	681,910	35·58
1915 ..	726,780	37·10	1924 ..	682,321	35·60
1916 ..	704,672	35·98	1925 ..	664,384	34·66
1917 ..	699,823	35·73	1926 ..	710,135	37·05
1918 ..	619,224	31·61	1927 ..	706,285	36·85

The decrease as compared with the previous year is shared by four Registration Districts—Central 5,695, Sind 4,056, Gujarat 690 and Southern 474. The Western Registration District shows an increase of 6,467 over the previous year while an increase of 598 occurred in Bombay City, over the previous year's figure—20,704.

5. The birth-rate for the year for the Presidency as a whole was 36·85 against 37·05 during the previous year. For the Presidency proper excluding Bombay City and Sind the rate was 41·32 against 41·35 and for the Province of Sind 23·05 against 24·30 in 1926. The drop in the figures for the Presidency as a whole appears to be due principally to a fall in the Nawabshah, Thar and Parkar, Larkana, Ratnagiri and Sholapur districts.

Regarding the decrease in Sind, the Assistant Director of Public Health writes:—

“There are many causes to which the decrease can be attributed but none of them appear to explain the different high and low incidence of births among the districts of Sind. Some of the causes such as inadequate and incompetent registration agency have already been sufficiently explained in previous reports. Since 1925 some of the school masters who were registering births and deaths, fairly well, have refused to co-operate with the Revenue authorities without remuneration. Then again this year weather conditions have been decidedly unfavourable in Sind, the chief sufferers being Thar and Parkar and Hyderabad districts, acute distress being experienced in the talukas of the districts where abnormal rainfall destroyed crops, houses, cattle, etc. Economic distress does not affect the birth-rate in India to the extent that it does in Europe. Sociological causes are more at work in India (and specially in Sind) than economic influences in promoting marriages. Thus we have Nawabshah the worst sufferer in Sind as regards births, whereas the Thar and Parkar and Hyderabad suffered to a lesser extent though weather conditions were much more severe. The increase in births in Karachi district, is very slight and the increase in Jacobabad district cannot be explained on the basis of economic prosperity as the district suffered very much from the vagaries of the river.”

The biggest drop of all occurred in the Ratnagiri district.

The rates recorded in other parts of India for the last two years are given below :—

	1927	1926		1927	1926
Madras ..	36·05	36·10	Bihar and Orissa	37·64	37·28
Bengal ..	27·07	27·43	United Provinces	36·73	34·20
Assam ..	30·25	30·82	Punjab	42·27	41·65
Burma ..	25·08	27·59	Central Provinces	45·58	46·03

In the Central Registration District, Ahmednagar Collectorate recorded the highest rate (50·06) and Ratnagiri Collectorate the lowest (33·17). Poona and Satara showed an increase while Sholapur showed a slight decrease.

In the Gujarat Registration District, the birth-rate for 1927 when compared with the ratios recorded in 1926 shows an increase in Kaira and Panch Mahals Collectorates by 0·88 and 4·44 respectively, while Surat, Broach and Ahmedabad Collectorates show a decrease of 0·06, 1·39 and 2·83 respectively. The rate recorded in Panch Mahals district is the highest during the last 10 years.

In the Southern Registration District, although there is a slight decrease on the whole as compared with the figures for last year, all the districts show an increase over the mean for the last 10 years. Dharwar and Kanara districts show an increase of births over the last year, while Belgaum and Bijapur show a decrease. The district of Dharwar has maintained its rising birth-rate in spite of the severe epidemic of cholera which was the main cause of the drop in the birth-rate of the other two districts. The birth-rate in Kanara district has recovered from the marked drop which occurred in 1925 and which was due to the prevalence of severe malaria.

In the Sind Registration District, the largest increase in births is shown in Upper Sind Frontier district by 1,531 births and the lowest in Karachi by 327 births. The largest decrease is shown in Nawabshah by 1752 births and the lowest in Sukkur by 631 births.

In the Western Registration District, the birth-rate in 1927 when compared to the year previous shows a rise in East Khandesh, West Khandesh, Nasik and Thana Collectorates and a slight fall in Bombay Suburban and Kolaba.

6. In the Presidency as a whole, the birth-rate for rural areas was 38·73 and for urban areas 29·12 against 39·04 and 28·88 respectively in 1926. For the Presidency proper excluding both Sind and Bombay City the rural birth-rate was 42·78 and the urban 32·54 against 42·82 and 32·47 respectively, in 1926. Of the 27 districts in the Presidency the highest birth-rate was recorded in West Khandesh (51·83), and the lowest (16·09) in Hyderabad. Twelve returned a birth-rate of 40 or more per mille of population, *viz.*, Ahmednagar (50·06), Nasik (48·43), Broach (47·61), East Khandesh (47·52), Sholapur (45·13), Panch Mahals (44·67), Satara (42·19), Belgaum (41·63), Kolaba (41·14), Surat (41·03),



Bijapur (40·39) and Dharwar (40·01). Six returned rates between 30 and 40, *viz.*, Kaira (38·71), Ahmedabad (37·59), Poona (36·46), Kanara (35·16), Thana (35·00) and Ratnagiri (33·17) and the remaining six Sind districts returned low rates under 30, *viz.*, Karachi (28·57), Upper Sind Frontier (26·64), Sukkur (26·40), Thar and Parkar (23·52), Nawabshah (21·68), Larkana (21·16) and Bombay Suburban (18·78).

7. Of the 189 talukas, pethas and mahals in the Presidency proper, 160 or as many as 85 per cent. returned birth-rates over 35 per mille of population—34 of these areas yielding figures above 50, 84 areas figures between 40 and 50 and 42 areas figures between 35 and 40 per mille. Twenty-one returned rates between 30 and 35. The rates varied from 79·24 in Pathardi in Ahmednagar and 73·36 in Sakri of the West Khandesh district to as low a figure as 17·56 in South Salsette and 14·93 in Poona City taluka. Amongst others showing low rates the following six talukas comprising 3 per cent. of the total, returned birth-rates below 30 per mille of population, *viz.*, Mawal (29·51), Bassein (29·12), Navalgund (27·81), Yellapur (27·58), Supa (26·02) and Malcolmpeth (23·00).

8. Out of 86 urban areas in the Presidency proper 19 returned birth-rates exceeding 40. In general the majority of Gujarat towns show the highest rates, *e.g.*, Godhra (54·69), Borsad (54·98), Jambusar (49·13), Umreth (46·56), Dholka (46·19), Dhandhuka (45·56), Mehmedabad (43·78), Broach (43·68), Ahmedabad (42·78). Besides these, there are ten towns outside Gujarat which returned a birth-rate of over 40 per 1,000, *viz.*, Nasirabad (51·94), Honawar (46·91), Guledgud (45·60), Ranebennur (44·29), Bagalkot (43·65), Sholapur (42·35), Dhulia (41·44), Ilkal (41·08), Parola (40·40), and Gadag-Bettigeri (40·11). Twenty-three towns recorded birth-rates between 30 and 40 per mille of population and 37 towns showed rates between 20 and 30. In the remaining 8 towns the recorded birth-rates were under 20, amongst the lowest being Poona Suburban (6·66), Uran (13·27), Thana (15·55), Mahad (15·99), Bassein (16·59), Kurla (18·15), Poona City (19·38) and Satara (19·82).

As remarked in previous reports, inefficient registration on the part of municipalities continues to be the chief factor in showing these inordinately low rates. No attempt appears to have been made by any for its improvement.

The births recorded in Bombay City were 21,302 or 598 more than in the previous year equivalent to a birth-rate of 18·54—an increase of 0·52.

9. Sind recorded 75,193 births, a decrease of 4,056 on the figures for 1926 but an increase of 6,631 over the decennial mean ending 1926 and 1,575 over that ending 1916. The birth-rate for the Province was 23·05 against 24·30 in 1926. The birth-rate for rural areas was 20·18 and for urban areas 39·10 as against 21·69 and 38·83 respectively in the previous year. As usual, the urban birth-rate greatly exceeds the rural in contrast to the Presidency where the reverse is invariably the case.



Of the 61 talukas and mahals in Sind, 4 or 7 per cent. returned birth-rates above 30 per 1,000 of population, *viz.* Sukkur (39·12), Kandhkote (33·59), Ratodero (32·54) and Diplo (32·18). Twenty-seven talukas or 44 per cent. returned birth-rates between 20 and 30, and the rates for the remaining 30 or 49 per cent. of the total were all below 20 per mille of population. Of these, excessively low rates of 10 per mille and under, were returned from two—Tatta and Ghorabari—in the Karachi district and from two—Badin and Tando-Bago of the Hyderabad district. Tatta taluka has shown a poor birth-rate for some years the reasons being emigration and defective registration. In Ghorabari taluka the low birth-rate is due to the unsettled condition of the population which migrates during the inundation season. In Badin and Tando-Bago, the decrease appears to be due to heavy rains and floods during the year under report and the consequent agricultural depression. The general cause of deficient birth-rates in rural areas has already been discussed in the Report for 1925.

The efficiency in registration in the urban circles of Sind varies. Of the 19 town circles, eleven show an increased birth-rate over the mean of the previous 5 years and only 8 show a decrease. These are Sukkur, Rohri, Umarmkot, Jacobabad, Hala, Matiari, Tatta and Kotri. In these the birth-rate varied from 51·33 for Karachi City to 11·02 in Kotri town. Of the 19 towns, 3 recorded birth-rates over 40 per mille of population, *viz.*, Karachi (51·33), Ratodero (45·28) and Hyderabad (41·63). Four returned birth-rates between 30 and 40, three between 20 and 30 and the remaining 9 returned rates that indicate extreme default, *viz.*, Kotri (11·02), Mirpurkhas (12·83), Tatta (16·99), Matiari (17·03) Hala (17·20), Tando Adam (17·36), Jacobabad (17·86), Umarmkot (18·57) and Sehwan (19·67). These municipal towns have been constantly figuring in previous annual reports as showing defective registration and the reasons for the default have also been pointed out.

10. *Births in Cantonments.*—Of the 9 Cantonments, Karachi (29·58), Nagar (23·64), Kirkee (18·40), Belgaum (13·08) and Ahmedabad (12·61) show the highest rates while for the remainder the figure was below 10, the lowest being recorded in Santa Cruz.

11. *Births according to Sex.*—Out of 706,285 births, 366,694 were males and 339,591 females equal to ratios of 19·13 and 17·72 per mille of population, as compared with 368,823, and 341,312 and 19·24 and 17·81 in 1926. For every 100 female births, there were 107·98 male births, the previous year's figure being 108·06. The percentage of male to female births registered varied from 103·35 in Belgaum district to 136·32 in Nawabshah. The proportion of male to female births is high throughout Sind.

12. *Still-Births.*—11,117 still-births were registered or 1·57 for every 100 live births. The corresponding figures for 1926 were 11,550 and 1·63 respectively. The percentage of still-births to live births recorded varied from ·09 for the Upper Sind Frontier district to 8·31 for the City of Bombay. For other areas, Kanara (5·07), Dharwar (3·59), Kolaba (3·03), Belgaum (2·65), Bijapur (2·52), Surat (2·36), Karachi (2·18) show the highest percentages.



13. In the Southern Registration District, omissions of 948 births and 123 deaths were discovered by Inspectors and Vaccinators against 810 and 126 in the preceding year. The omissions included 468 births and 41 deaths in Belgaum, 228 and 27 in Dharwar, 118 and 11 in Bijapur and 134 and 44 in Kanara districts. The omissions of 36 births and 3 deaths were discovered in Western Registration District, of 1,035 births in Sind against 1,230 in 1926 ; of 23 births and 13 deaths in Central Registration District, and 245 births and 4 deaths in Gujarat as compared with 418 and 30 respectively in 1926.

### *Deaths*

14. The year under report shows a decrease in mortality as compared with the previous year, and with the quinquennial mean, a decrease appearing under all headings except cholera.

The total number of deaths registered was 492,891 as compared with 547,264 in 1926 and 495,706 the quinquennial mean. Comparison is shown in graphic form at the beginning of this Section. The totals for previous years are given in the following table :—

Year	Deaths	Year	Deaths
1901-1910 mean..	639,483	1921	498,350
1911-1915 mean..	539,836	1922	452,581
1916 ..	652,584	1923	496,244
1917 ..	798,406	1924	529,576
1918 ..	1,724,074	1925	453,563
1919 ..	637,170	1926	547,064
1920 ..	516,296	1927	492,891

15. The recorded death-rate for the whole Presidency works out to 25·72. The death-rate in 1926 was 28·55, the quinquennial mean being 25·86.

For other parts of India, the death-rates recorded are as under :—

	1927	1926		1927	1926
Madras ..	24·3	25·57	Bihar and Orissa ..	25·08	25·71
Bengal ..	26·6	24·74	Punjab ..	27·46	36·52
Assam ..	23·47	23·02	United Provinces ..	22·59	25·10
Burma ..	19·55	20·92	Central Provinces ..	31·31	34·33

It will be seen from the above table that with the exception of Assam and Bengal a decrease in the death-rate was general throughout India.

Excluding Bombay City and Sind the death-rate for the Presidency was 28·03 against 30·68 in 1926.

The death-rates for rural and urban areas for the Presidency as a whole were 25·49 and 26·56, respectively, against 27·98 and 31·22 in 1926.

Of the districts, the highest death-rates were returned by Sholapur (34·61), Belgaum (33·31), Satara (31·43), and Kanara (31·16) and the lowest by Thana (19·85) and Bombay Suburban (16·55). The high death-rate in Belgaum, Sholapur and Satara districts was mainly due to the prevalence of cholera. In Kanara the chief causes for the high mortality may be again attributed to malaria and dysentery.

By Registration Districts the increase or decrease in the number of deaths was as follows :—

The decrease in the number of deaths as compared with the previous year is shared by the 3 Registration Districts—Western 20,578, Gujarat 24,176 and Sind 10,988, and by Bombay City 4,273 while the Central and Southern Districts show an increase over the previous year of 3,208 and 2,434 respectively.

The decrease in the number of deaths in the Gujarat Registration District is not surprising as the year 1926 recorded the highest mortality since 1921. Compared with the figures for 1925 in which a low mortality rate was returned, the year under report showed an increase of 7,275 in the total number of deaths and 2·47 in the death-rate, while compared with the quinquennial mean for 1921 to 1925 there was an increase of 3,879 in the total number of deaths and 1·32 in the death-rate.

16. Of the 189 talukas, pethas and mahals in the Presidency proper, 11 as compared with 20 in the previous year show death-rates exceeding 40 per mille of population. These are Haliyal (54·63), Mundgod (51·77), Pathardi (50·01), Shevgaon (43·99), Sampgaon (43·40), Murgod (42·91), Karmala (42·28), Man (41·45), Hangal (40·72), Barsi (40·63) and Kod (40·20). Fifteen returned death-rates between 35 and 40 and 39 recorded rates between 30 and 35. Of the remaining 124, 106 recorded rates between 20 and 30 while only 6 returned rates below 20 per mille of population.

17. For urban areas death-rates varied between 51·17 for Pandharpur town and 11·10 for Trimbak. Out of 86 urban registration circles in the Presidency proper, 6 returned death-rates over 40, *viz.*, Pandharpur (51·17), Ilkal (47·32), Nasirabad (41·27), Poona City (41·25), Ranebennur (43·79) and Ahmedabad (40·17). Sixteen returned rates between 30 and 40, *viz.*, Gadag-Bettigeri (37·83), Barsi (37·46), Bagalkot (37·08), Surat (35·30), Belgaum (34·82), Sholapur (34·29), Guledgud (34·01), Dakore (32·42), Umreth (32·30), Viramgaon (32·23), Nipani (32·08), Borsad (31·12), Nadiad (30·80), Mehmedabad (30·79), Dholka (30·61) and Ashta (30·50). Thirty-four returned rates between 20 and 30 and the remaining 30 returned rates below 20.

18. *Corrected death-rates.*—The following table gives the death-rates in accordance with age and sex distribution for the Presidency proper and for the six towns for which such correction is possible:—

	Standard death-rate	Factor for correction	Recorded death-rate	Corrected death-rate.
Presidency excluding Bombay and Sind..	39·8	1·0	28·03	28·03
Ahmedabad .. .. .	37·6	1·06	40·17	42·58
Bombay City .. .. .	28·6	1·39	23·84	33·14
Poona .. .. .	37·0	1·08	41·25	44·55
Sholapur .. .. .	39·4	1·01	34·29	34·63
Surat .. .. .	39·0	1·02	35·30	36·01
Karachi .. .. .	38·5	1·03	29·50	30·38



19. The birth and death returns of the chief cities may be briefly noted on as follows :—

*Bombay*.—Population 1,148,815. The registered deaths amounted to 27,384 as against 31,657 in 1926. The death-rate per mille of population was 23·84 against 27·56 in 1926. 21,302 births were registered equal to a birth-rate of 18·54 as compared with 20,704 and 18·02 in 1926. The number of infantile deaths was 6,798 or a ratio of 319·12 per 1,000 registered births as against a rate of 393·79 in the previous year. The chief causes of death shown in the returns were small-pox, fevers, dysentery and diarrhoea, respiratory diseases (pneumonia and phthisis contributing a large number of deaths) and other causes.

*Ahmedabad*.—Population 270,899. The number of births registered was 11,577 equal to a birth-rate of 42·78 as against 11,495 and 42·47 respectively, in 1926. The registered deaths were 10,871 corresponding to a death-rate of 40·17 compared with 14,067 and 51·98 respectively, in 1926. The number of infantile deaths was 3,320 equal to a ratio of 287·27 per 1,000 registered births, as against a rate of 437·76 in 1926. The chief causes of death shown in the returns were fevers, respiratory diseases and other causes. The city shows a steady increase in births since 1922 and the birth-rate recorded in 1927 was the highest during the last 10 years.

*Poona*.—Population 133,122. The total deaths registered amounted to 5,491 equal to a death-rate of 41·25 as compared with 5,788 and 43·47 respectively, in 1926. Births registered were 2,580 equal to a birth-rate of 19·38 as against 2,565 and 19·26 respectively in the previous year. The chief causes of death shown in the returns were small-pox, fevers, respiratory diseases (pneumonia and phthisis again appear largely under the latter headings) and other causes. The number of infantile deaths was 1,533 or a ratio of 594·18 per 1,000 registered births as against a rate of 732·55 in 1926. The infant mortality rate of this town is always abnormally high owing to the defective registration of births. But after making due allowance for this the rate remains the highest in the Presidency. After numerous representations on the subject, the municipality are taking steps to secure more accurate registration in future.

*Karachi*.—Population 199,014. The total births registered were 10,217 equal to a birth-rate of 51·33 against 9,442 and 47·43 respectively, in 1926. 5,872 deaths were registered showing a decrease of 893 over the previous year's figure—6,765. The death-rate was 29·50 compared with 33·99 in 1926. Fevers and respiratory diseases were among the chief causes of death. The infant mortality rate per 1,000 registered births shows a decrease from 252·70 to 211·02.

*Surat*.—Population 117,428. There were 4,615 births recorded as against 4,394 in 1926. The birth-rate shows an increase from 37·42 to 39·30 per mille of population. The city has shown a steady increase in births since 1922 and the birth-rate recorded in 1927 is the highest during the last 10 years. The total deaths recorded were 4,145 equal to a death-rate of 35·30 compared with 5,691 and 48·46 respectively, in



the previous year. The number of infantile deaths was 1,501 or a ratio of 325·24 per 1,000 registered births as against a rate of 452·89 in 1926.

The chief causes of deaths shown in the returns were small-pox, fevers, respiratory diseases and other causes.

*Sholapur.*—Population 119,347. Total deaths recorded were 4,092 as compared with 4,172. Fevers and respiratory diseases were among the chief causes of death while cholera was responsible for 110 deaths equal to a death-rate of 0·92 per mille of population. 5,054 births were registered equal to a birth-rate of 42·35 as against 5,122 and 42·92 respectively in 1926. The infant mortality rate per 1,000 registered births was 199·05 as against 223·94 in the previous year.

20. *Death-rate in Sind.*—The death-rate for Sind was 15·92 as compared with 19·29 in 1926. The urban (24·91) greatly exceeds the rural death-rate (14·30) as in previous years and is attributable to faulty registration in rural areas. The urban death-rate ranged between 8·85 for Hala and 30·26 for Umarkot and the rural death-rate between 8·09 for Ghorabari and 26·98 for Diplo talukas. Out of 19 urban circles in Sind, 3—Umarkot, Kambar and Kotri—show a higher death-rate than that of the five years' mean.

21. *Death-rate in Cantonments.*—The lowest death-rate 0·85 was recorded in Santa Cruz while Kirkee headed the list with a rate of 30·66 (as compared with 36·04 in the previous year). Respiratory diseases in the latter Cantonment were responsible for 113 deaths equal to a rate of 14·14 per mille of population. Of these, 60 were due to pneumonia, 25 to phthisis and 28 to other respiratory diseases. The death-rates recorded in other Cantonments were Nagar (19·34), Belgaum (18·02), Ahmedabad (16·05), Karachi (11·03), Poona (9·89) and Deolali (3·87).

22. *Births versus Deaths.*—Over the Presidency as a whole births exceeded deaths by 213,394 or a “natural increase” of 1·11 per cent. on the population compared with 0·85 per cent. for the year previous. In the Presidency excluding Sind and Bombay City, the percentage of increase amounts to 1·33 as against 1·07. For Sind, the figure is ·71. In Bombay City, on the other hand, deaths exceeded births by 6,082 or 0·53 per cent. of the City's population. Further details are given in columns 6 and 9 of Annual Form No. II.

23. *Mortality according to Sex.*—255,784 male and 237,107 female deaths were recorded giving death ratios per 1000 of each sex of 25·45 and 26·01, respectively, against 28·07 and 29·08 for 1926. For every 100 females 107·88 males died as compared with 106·39. In Sind, the ratio of male to female deaths during the year was 120·74 to 100.

### *Infant Mortality*

24. There were 114,009 deaths among infants under twelve months corresponding to a ratio of 161·42 per 1,000 registered births as against 138,213 or a ratio of 194·63 in 1926. The male and female rates were 167·89 and 154·43, respectively, as compared with 203·43 and 185·12 in the previous year.

The improvement in these figures, which suffered a slight setback during 1926 after showing steady progress from 1918 onwards, is thus renewed. It affects both sexes, at all age periods, and in urban as well as rural districts.

*Infant mortality 1927, compared with previous years.*

Year	Deaths under 12 months			Births registered			Infant death-rate per 1000 births			Infant deaths per 100 of total deaths
	Male	Female	Total	Male	Female	Total	Male	Female	Total	
1927 ..	61,564	52,445	114,009	366,694	339,591	706,285	167·89	154·43	161·42	23·13
1926 ..	75,030	63,183	138,213	368,823	341,312	710,135	203·43	185·12	194·63	25·25
1925 ..	58,083	49,551	107,634	346,373	318,011	664,384	167·69	155·81	162·01	23·73
1924 ..	70,489	59,950	130,439	353,631	327,690	682,321	198·77	182·95	191·17	24·63
1923 ..	59,228	49,684	108,912	354,890	327,020	681,910	166·89	151·93	159·76	21·95
1922 ..	57,130	47,841	104,971	323,631	297,139	620,770	176·53	161·01	169·10	23·19
1921 ..	60,231	51,023	111,254	325,751	298,889	624,640	184·90	170·71	178·11	22·32
1920 ..	59,236	49,440	108,676	309,463	283,712	593,175	191·42	174·26	183·21	19·36
1919 ..	58,950	51,398	110,348	285,195	261,265	546,460	206·70	196·73	201·93	17·32
1918 ..	94,553	83,124	177,677	322,546	296,678	619,224	293·14	280·17	286·93	10·32
1917 ..	79,984	71,649	151,633	363,460	336,362	699,822	220·06	213·01	216·67	18·99
1916 ..	75,328	65,304	140,632	365,057	339,615	704,672	206·34	192·29	199·57	21·58
1915 ..	67,440	57,569	125,009	376,930	349,850	726,780	178·92	164·55	172·00	24·43

Of the infants who died, 47,731 were in their first month of life (27,438 under and 20,293 over one week) ; 38,536 were over one month but not exceeding six months and the remainder 27,742 between six and twelve months. The percentage of total infant mortality under each of these three sub-groups works out to 41·87, 33·80 and 24·33 respectively.

The details of the average hundred infant deaths in each Registration District are given in the following table :—

District			Infantile deaths				
			In every 100 total deaths	Per 1,000 registered births	Not exceeding one month	1-6 months	6-12 months
Western ..	..	..	27·04	154·98	44·65	34·43	20·92
Central ..	..	..	22·30	160·44	38·80	36·77	24·43
Southern ..	..	..	18·31	139·92	46·60	34·18	19·22
Gujarat ..	..	..	25·30	171·07	40·53	33·37	26·10
Sind ..	..	..	22·47	155·19	41·09	28·04	30·87
Bombay City ..	..	..	24·82	319·12	37·20	28·39	34·41
Presidency ..	..	..	23·13	161·42	41·87	33·80	24·33

Throughout the Presidency the mortality among infants was greatest in the first month of life.



# DEATH-RATE at EACH AGE PERIOD

MALES. ← → FEMALES.

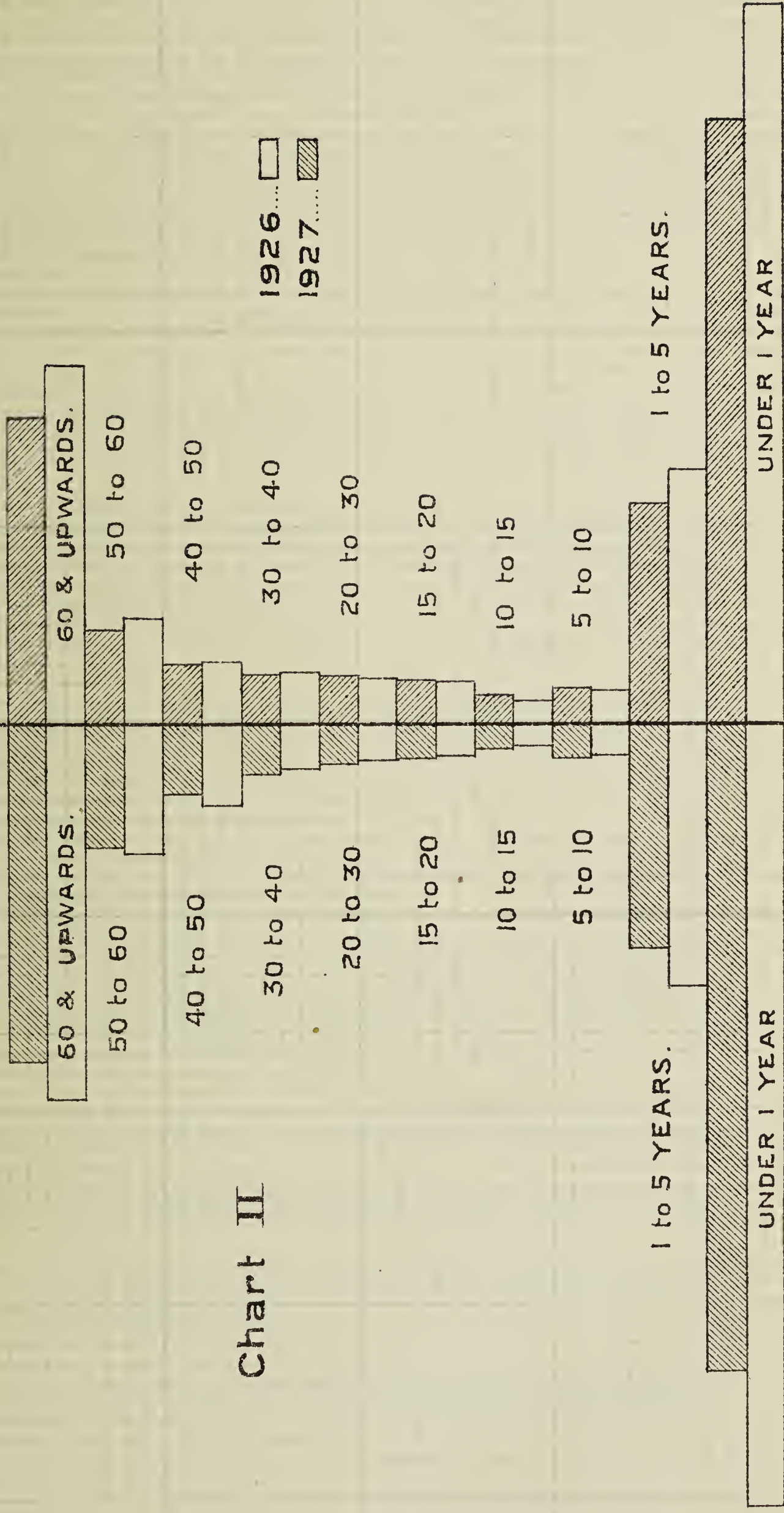


Chart II

MALES. ← → FEMALES.

200 150 100 50 0 50 100 150 200





The urban and rural infantile death-rates per 1,000 births for the Presidency as a whole were 234·15 and 148·15 respectively as compared with 300·56 and 175·61 in the previous year. The highest rural infantile death-rate was recorded in Kanara (199·30) and the lowest in Ratnagiri (94·32). Among the larger towns the following record the highest rates :—

Poona City (594), Pandharpur (425), Viramgaon (382), Surat (325), Bombay City (319), Kurla (300), Ahmedabad (287), Satara (271), Barsi (262), Jalgaon (238), Shikarpur (242), Karachi (211), Hyderabad (210), Sholapur (199) and Nadiad (194).

Detailed figures are given in Annual Form No. VI (a).

The Assistant Director of Public Health, Central Registration District writes :—

“ It is essential that a complete midwifery and child welfare scheme should be carried out in every municipal area. The Sholapur Municipality is moving in this direction and the work of construction of a new model Maternity Home and Child Welfare centre is now in progress. The District Local Board, Sholapur, have appointed two travelling midwives.

As the Lady Wilson Village Baby Scheme has been working successfully in Poona District, it was decided to extend its scope in the Presidency with the aid of a Government grant equal to one-third of the expenditure upto a maximum of Rs. 10,000 a year.

District Committees have been formed at the following places, *viz.*, Poona, Sholapur, Bijapur, Thana, Dhulia, Karwar and Dharwar. Training of dais has been started in Poona, Sholapur, Bijapur and Ratnagiri Districts.”

The Assistant Director of Public Health, Southern Registration District, reports :—

“ Greater attention is being paid by the municipalities in this Division to the maintenance of midwives in their respective areas who advise and explain to expectant mothers the dangers of employing untrained dais. As a result 482 confinements were attended by municipal midwives, or 350 more than during the previous year. In addition, 444 confinements were attended by Red Cross midwives thus making a total of 926 confinements attended by qualified midwives.

Six Red Cross midwives were working during the year in Dharwar district and one in Belgaum town. They attended 164 and 280 cases, respectively. They gave advice to mothers regarding the proper care of their infants.

Public Health activities and Public Health propaganda work such as Health Weeks Baby Shows, etc. were held in increasing numbers during the year as a means towards tackling the question of infant mortality in this Division. Public interest on this very vital point seems to be gradually awakening. With almost an equal number of birth during this year as in the last, the infant mortality in 1927 has dropped to about 140 from 158 at which it stood in 1926—an improvement which is by no means negligible. It means roughly saving the lives of about 2,400 babies during the year in this Division alone.”

The following is a brief extract from the section that deals with infant mortality in the Annual Report of the Executive Health Officer, Bombay Municipality :—

“ *Bombay City.*—The number of deaths among infants under one year of age was 6,857 being 1,343 less than in 1926 and 3,175 less than the annual average in the ten years 1917-1926.

The infant mortality rate expressed as the number of deaths in infants per 1,000 registered births was 316 as compared with a rate of 389 in 1926 and of 483 the annual average in the decennium (1917-1926).

Of the total deaths 4,631 occurred among infants born in Bombay and 2,226 in infants born elsewhere.

Were the rate to be calculated only on the deaths of infants born and registered in Bombay in proportion to the registered births it would be reduced from 316 to 214.



*Causes of Death.*—It will be seen that 5,224 or nearly 76 per cent. of the total deaths in infants were due to diseases of the respiratory system, infantile debility and premature birth against 77 per cent. (6,347 deaths) in 1926. Diarrhœa and enteritis caused 333 deaths, malaria, ague and remittent fevers 115 deaths and convulsions 588 deaths. The deaths from small-pox and measles numbered 151 and 32 respectively.

*Quinquennial Averages.*—Compared with the averages of the preceding five years, the total number of deaths was less by 1,430 the principal decreases in the mortality being 292 under diseases of the respiratory system, 2 under measles, 260 under diarrhœa and enteritis, 541 under infantile debility and premature birth and 353 under convulsions. On the other hand increases were registered under small-pox (51) and ague and remittent fever and fever not defined (6) and dysentery (7).

Of the total deaths among infants, 1,590 or 23 per cent. took place in the first week of life and 962 or 14 per cent. in the age-period 1 to 4 weeks.

The mortality among infants who had not completed the first month of life was thus 2,552 or 37 per cent. of the total infant deaths. The number of deaths in the age-groups 1 to 6 months and 6 to 12 months was 1,949 and 2,356 being respectively 28 and 34 per cent. of the total infant mortality.

The salient features are the magnitude of the role played by debility and prematurity in the causation of death in the first 4 weeks of life and the large proportion of deaths from respiratory diseases during the remaining 11 months of infancy.

*Infant Mortality by Races.*—Infant mortality among the principal castes are Hindus all other castes 341, Hindus low caste 341, Mussalmans 312, Parsees 114, Jews 126, Indian Christians 306, Anglo-Indians 177 and Europeans 123.

The high rates recorded suggest the presence in Bombay of some adverse factor in addition to the poverty and ignorance which are chiefly responsible for high rates in western countries. The added factor affecting all classes is probably Malaria; another factor which can hardly fail to enhance the infant mortality among the more ignorant portions of the population is the practice of soothing babies by the administration of opium.

Syphilis as recently emphasized by the delegates of the British Social Hygiene Council contributes to the death roll but whether to a greater extent than in other cities it is not possible to say when an overwhelming majority of the total deaths under one year are not certified by medical practitioners.

The percentage of population occupying tenements of one room and under to the total number of occupants in all classes of tenements in the City by the Census of 1921 was 66. Of the 21,685 births registered in the year, 11,615 or 54 per cent. occurred in families living along in a single room or sharing it with others, and the number of deaths in infants in this class of population was 5,688 or 83 per cent. of the total infant mortality.

It will be observed that the rate of deaths among infants in single room tenements per 1,000 births in such tenements during the year was 490 against 577 in 1926, and that the proportion of deaths to births varies inversely as the number of rooms occupied by the parents. For two-room residences the figure is 203; 3 rooms 222; and four or more rooms 195 and for Hospitals 88.

*Prevention of Infantile Mortality.*—The work which is being done in Bombay for the reduction of infant mortality may be described under the following heads:—

- (i) Visits by the Municipal District Nurses for the purpose of getting into touch with prospective mothers and for discovering cases of sickness especially among women and children and unvaccinated children; for inquiry into the condition of new-born infants and for giving instruction by homely talks as to the care and rearing of children.
- (ii) Attendance on confinements.
- (iii) Provision of necessaries and comforts during the lying-in period.
- (iv) Maternity Homes.
- (v) Infant Milk Depots.
- (vi) Infant Welfare Centres.

*Summary of Work.*—During the year 10 Municipal nurses paid 37,397 visits to houses chawls and huts (against 43,906 in 1926) inquired into 2,910 cases of ordinary sickness, and reported 206 cases of infectious diseases and 455 deaths in the female population of the City. They also attended on 1,330 confinements (against 1,389 in 1926) and verified the reports of the Birth Karkuns on 5,040 births. Of the women confined 1,411 were primiparæ.

Of the total number of 23,465 births (including 1,780 still-births) registered in the City during the year, 9,831 or 42 per cent. were verified by the Municipal nurses against 43 per cent. in 1926 and 45 per cent. in 1925.

Among the cases wherein enquiries were made, the proportion of births wholly unattended was 6 per cent. and that of confinements attended by unskilled women 38 as against 6 and 37 respectively in 1926.



The percentage of confinements attended by qualified midwives (other than municipal) was 9 against 11 in 1926 and that of confinements attended by municipal midwives was 13 as against 14 in the preceding year; the percentage of children born in Hospitals (33) showed an increase of 3·2.

The percentage of children born in healthy condition was 68 as against 66 in the previous year and that of children fed on breast was 73 against 68 in 1926.

The proportion of children dying within 30 days of birth was 12 as in 1926.

The percentage of mothers who left home for work leaving their children to the care of others shows a decrease of 2·2.

Relief to poor women during confinement in the shape of necessities and comforts such as milk, bread, bed, blankets, charpoys and linen was continued during the year and dispensed in 333 cases against 297 in 1926 and 426 in 1925.

The total number of women admitted in all the three Municipal Maternity Homes during the year was 2,189 against 1,798 in 1926. The number of cases confined in the three Homes was 2,005 against 1,633 in 1926. Of the women confined, 527 were primiparæ.

Difficulty has been found in filling the beds at the Victoria Road Home.

*Infant Milk Depots.*—Two Infant Milk Depots have been established, one at the Bellasis Road and the other at the Victoria Road Maternity Home for distributing daily pure milk free or at a nominal price, for the benefit of children born in the Homes or under the supervision of the Municipal Nurses. 21,263 seers were distributed at these depots during the year.

*Voluntary Welfare Centres.*—The Maternity and Child Welfare Scheme of the Infant Welfare Society has made much progress. At the end of the year the centres established numbered nine. The Society provides through them (1) advice and instruction to mothers as to infant management, (2) medical aid to infants and (3) a staff of trained nurses for visiting the homes of infants. Each centre is in charge of a supervisor who is a trained nurse and a midwife. She supervises the milk distribution and assists the Lady Doctor in charge in attending on babies and advising mothers on infant management. There is also a Health Visitor, who is a trained nurse midwife attached to each centre. She visits the babies in the district and persuades their mothers to take advantage of the Infant Welfare Scheme.

During the year, 24,430 seers of milk were given free, 23,444 seers were sold at 1 anna a seer and 64,661 seers at 2 annas a seer. The number of new admissions at the nine centres was 4,401 and that of attendances for milk, medicine, treatment and advice 300,100.

The number of confinements attended by the Midwives of the Society was 1,126.

A Creche is attached to the Delisle Road Centre and now contains 44 children."

25. *Deaths by Castes or Classes.*—Deaths by classes and by sex are recorded in Annual Form No. V, Appendix III.

26. *Deaths according to Causes.*—The following table shows the number of deaths in 1927 and the ratio per 1,000 of population arranged according to causes and contrasted with the figures for 1926 and with the mean for the preceding five years :—

Causes	1927		1926		Mean for five years	
	No.	Ratio	No.	Ratio	No.	Ratio
Cholera .. .. .	26,153	1·36	73	·00	4,071	·21
Small-pox .. .. .	5,091	·27	3,922	·20	4,940	·26
Plague .. .. .	4,076	·21	9,866	·51	14,760	·77
Fevers .. .. .	186,543	9·73	222,466	11·61	202,982	10·59
Dysentery and Diarrhœa .. .. .	25,447	1·33	34,158	1·78	25,417	1·33
Respiratory Diseases .. .. .	87,963	4·59	103,038	5·38	88,841	4·63
Injuries .. .. .	7,873	·41	7,672	·40	7,625	·40
Other Causes .. .. .	149,745	7·81	166,069	8·67	147,210	7·68
All Causes .. .. .	492,891	25·71	547,264	28·55	495,846	25·87

There is a marked decrease in mortality under all disease headings except cholera, small-pox and injuries, as compared with last year.

Contrast graphs of the monthly incidence of deaths under the chief causes for the year under report compared with previous years are shown



in Chart III. Graphs of the monthly incidence of deaths from cholera and the annual incidence of deaths under the chief epidemic diseases cholera, small-pox and plague are also shown in Charts IV and V respectively.

Comments on the causes of death are made in Section VI.

27. *Cantonments in Native States.*—The total number of births in Cantonments situated in Native States during the year 1927 was 1,667 against 1,838 in 1926 giving a birth-rate of 14·97 per 1,000 of the population against 16·50 for the previous year. There were 1,979 deaths equal to a ratio of 17·77 against 2,382 and a ratio of 21·38. The statistics are tabulated below :—

*Statement showing the names of Cantonments with populaton and deaths from diseases for the year 1927.*

Cantonments	Population according to Census of 1921.	Area in square miles.	Average population per square mile.	Number of births.	Ratio of births per 1,000 of population.	Number of deaths from						
						Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory Diseases.	Injuries.
Aden Municipal limits. Purely Civil population of Cantonment ..	44,000	70	629	667	15·16	..	3	..	296	194	141	16
Baroda ..	650	7·44	87·37	9	13·85	..	..	..	10	..	..	1
Deesa ..	2,934	1·09	2,934	19	6·48	..	..	..	23	..	..	..
Mhow ..	5,449	3	1,816	88	16·15	..	..	..	34	4	..	..
Nasirabad ..	31,734	6·5	4,882	218	6·87	1	1	..	78	..	37	1
Neemuch ..	15,959	8	1994·7	465	29·14	..	..	..	194	37	29	2
Rajkot ..	10,490	4·52	2,539	201	19·16	..	..	..	110	7	43	..
	175	·50	350					Information not				
Total ..	111,391	101·05	1003·3	1,667	14·97	1	4	..	745	242	250	20

Cantonments	Name of deaths from		Ratio of deaths per 1,000 of population.								
	Other Causes.	All Causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory Diseases.	Injuries.	Other Causes.	All Causes.
Aden Municipal limits. Purely Civil population of Cantonment ..	417	1,097	..	·07	..	6·73	4·41	3·20	·36	10·16	24·93
Baroda ..	4	15	..	..	..	15·38	..	..	1·54	6·15	23·08
Deesa ..	5	28	..	..	..	7·84	..	..	..	1·70	9·54
Mhow ..	25	63	..	..	..	6·24	·73	..	..	4·59	11·56
Nasirabad ..	143	261	·03	·03	..	2·46	..	1·16	·03	4·51	8·22
Neemuch ..	73	335	..	..	..	12·16	2·32	1·82	·12	4·58	20·99
Rajkot ..	20	180	..	..	..	10·49	·67	4·10	..	1·91	17·16
	available										
Total ..	717	1,979	·01	·04	..	6·69	2·17	2·24	·18	6·44	17·77

28. *Rainfall*.—The monsoon started up to time in June and excellent rains were received throughout the Presidency. In August, however, the rainfall was deficient in most parts and remained so until the end of September.

*Sind*.—The monsoon falls of the year though late (July-August) were very severe in Mirpurkhas of Thar and Parkar district and Tando Adam of Hyderabad district. The total fall reached the unprecedented figure of 32 inches in a period of a few days, and caused destruction of crops, buildings and live stock. Advantage was, however, taken of the moisture left in the soil to raise rabi crops. In Thar and Parkar and Hyderabad districts the loss of cattle and damage to house property and Government buildings due to rains were also considerable. No areas were affected by floods in Nawabshah, Sukkur, Jacobabad or Larkana districts.

*Gujarat*.—Rainfall was good in the south of Gujarat but fell short of requirements in a large part of north Gujarat and Kathiawar. The most striking feature of the rainfall of July was the excess which occurred at the close of July throughout almost the whole of Gujarat, north of Broach and in a very large part of Kathiawar. The rains were so excessive that they caused heavy floods, washed away completely whole fields and villages in low-lying areas and damaged very seriously the growing crops. With the exception of north Gujarat and Kathiawar, the conditions were very satisfactory as the rains were generally favourable. The rains of August proved deficient in the rice tract of Surat district. The rainfall of the month though much below the average, proved on the whole sufficient as the fields were already fully saturated in all the areas north of Broach by the excessive July rains. September rains proved generally very useful. They helped the re-sown crops in the flooded areas of Gujarat. There was a large excess of rains in Panch Mahals in the month of October.

*Deccan*.—The rains were good both as regards quantity and distribution in most of the Deccan except a few places in Khandesh. The rainfall in July was deficient in the south-east of the Presidency comprising chiefly the eastern portions of Poona, Satara and a very large part of Sholapur, with the result that the crops showed signs of withering, but at the end of August good rain was received in many places. The showers of September proved especially beneficial in the east of the Deccan up to the middle of the month. In some places in the area (East Deccan) these rains proved, indeed, the turning point of the fortunes of the season. In October, a slight deficiency of rains was felt in the south-east Deccan.

*Konkan*.—Good rain was received in the months of June and July almost everywhere in the Konkan and in places adjoining the Western Ghats. In August, the rainfall though below the usual quantity, was well distributed. The showers of rains were satisfactory up to the middle of September. There was a large excess of rains in October in most of the Konkan.

*Karnatak*.—In June, the rainfall was short in east Karnatak, Bijapur and north portion of Dharwar but it was good in west Karnatak. The deficiency of rains continued until August in most parts but at the end



of August good rains were received in many places. September showers proved especially beneficent, but the most characteristic feature of the rains during October was the serious deficiency in the greater part of the Karnatak. Rainfall varying from 2 to 3 inches was received in most places between 10th to 15th November.

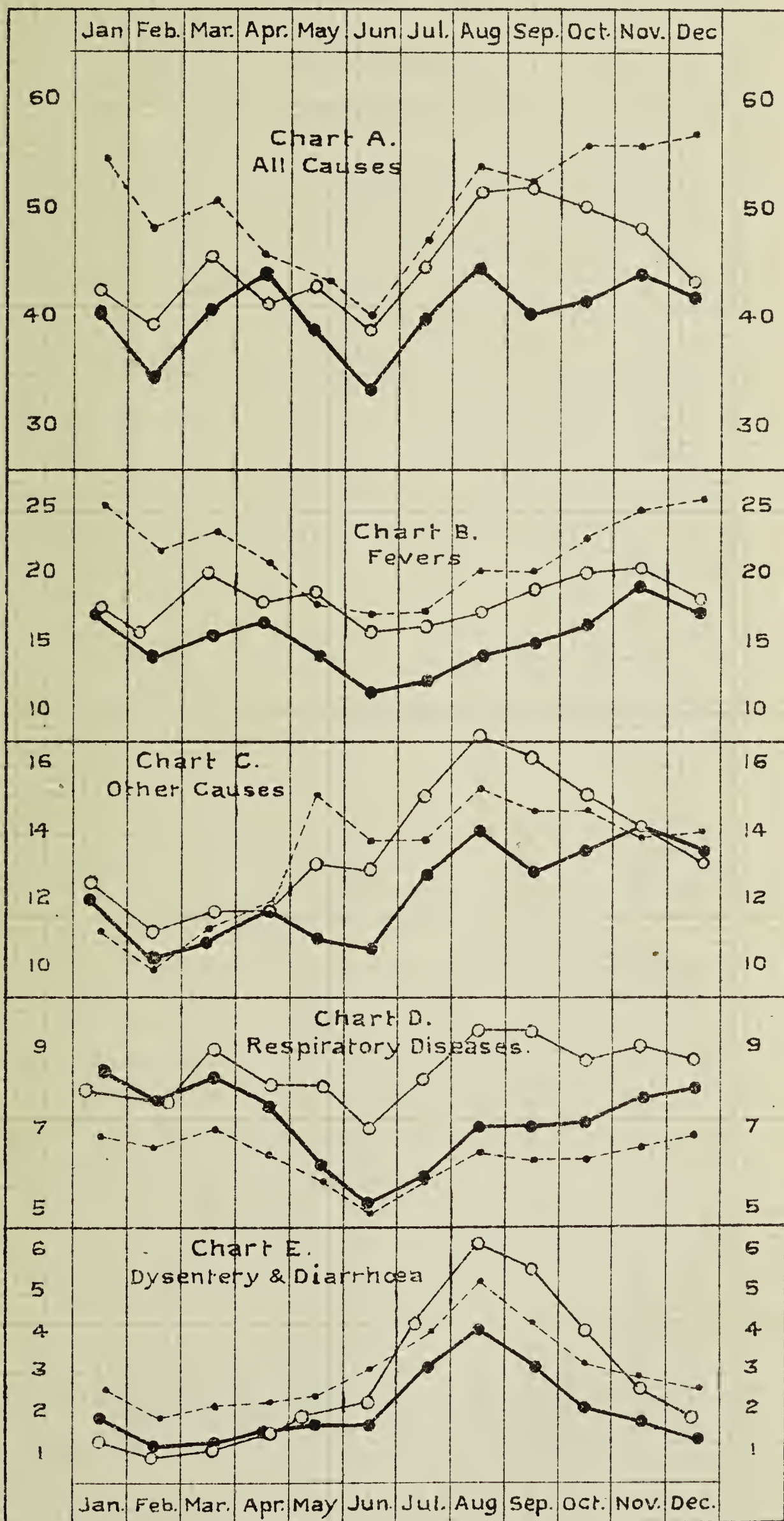
29. The prices of food grains in Gujarat, Konkan and the Deccan were cheaper than those of the previous year except Sholapur where they rose about 10 per cent., while in the Karnatak they were a little higher. In Sind, with the exception of Sukkur district, the prices were lower by about 15 per cent. and especially in the Nawabshah district where they fell by 30 per cent. Bombay rates were almost stationary.

# Chart III

## MONTHLY INCIDENCE OF DEATHS FROM CHIEF CAUSES.

1927 ●—●, 1926 ○—○, Previous average\* - - -

Scale figures represent deaths in thousands.



\* 1918 (Influenza year) Omitted in the average of Charts A. B. & D.





## SECTION VI

### HISTORY OF CHIEF DISEASES

#### *General Remarks*

30. Apart from the somewhat severe epidemic of cholera which prevailed in the Southern, Central and Western Registration Districts during the period April to October, the health of the Presidency as a whole compared favourably both with the previous year and with the mean for the five years 1922-26. In spite of a total mortality of 26,153 from cholera causing a rise in the death-rate from practically nil the previous year 1·36 per 1,000 (mean ·21) in 1927, there was a fall in the total death-rate for the Presidency from 28·55 to 25·71 (mean 25·86), which was due chiefly to improvement in the death-rates under the headings Fever (11·61 to 9·73, mean 10·59), Respiratory Diseases (5·38 to 4·59, mean 4·63), and Other Causes (8·67 to 7·81, mean 7·68); and to a lesser degree under Plague (·51 to ·21, mean ·77) and Dysentery and Diarrhoea (1·78 to 1·33, mean 1·33). Small-pox on the other hand showed a return to the mean of previous years (·20 to ·27, mean ·26).

Compared with the mean of the previous five years 1922-26, there was improvement under Fevers (10·59 to 9·73), and Plague (·77 to ·21), a severe falling off under Cholera (·21 to 1·36) while all other headings were about normal, *e.g.*, Small-pox (·26 mean ·27), Dysentery and Diarrhoea (1·33 mean 1·33), Respiratory Diseases (4·63 mean 4·59), and other Causes (7·68 mean 7·81).

These figures show once again that the death-rate of the Presidency is affected chiefly by variations under the headings Fever, Respiratory Diseases and Other Causes and to a slight extent only by the prevalence or otherwise of epidemics of Small-pox, Cholera or Plague.

Other favourable features of the year were (a) the lowest number of deaths from Plague since its importation into the Presidency, (b) a decrease in infant mortality from 194 in the previous year to 161, showing a return to the figure of 1923 (160) which was the lowest on record, (c) a birth-rate of 36·85, only slightly lower than that of the previous year, and (d) an excess of births over deaths of 213,394—an increase of births that is to say without a corresponding rise in the infantile death-rate which often accompanies it.

Details of the various diseases are given under separate headings and further comparison is shown in the table in paragraph 26 and in graphic form in the charts inserted in this Report.

#### *Fevers*

31. Fever mortality shows a considerable decrease on the previous year's figures—186,543 deaths (95,877 males and 90,666 females) against 222,466 in 1926, and also on the mean of the previous five years



(202,982). The death-rate was 9·73 as compared with 11·61 in 1926 and a quinquennial mean of 10·59.

The annual mortality recorded under this heading in previous years is given in the following table:—

Year	Fever deaths	Rate per mille	Year	Fever deaths	Rate per mille
1901-1910 mean ..	258,497	14·00	1921 ..	226,100	11·80
1911-1915 mean ..	247,926	12·66	1922 ..	197,888	10·33
1916 ..	262,401	13·40	1923 ..	196,231	10·24
1917 ..	298,919	15·26	1924 ..	214,563	11·20
1918* ..	1,284,013	65·55	1925 ..	183,764	9·59
1919 ..	274,759	14·03	1926 ..	222,466	11·61
1920 ..	266,092	13·58	1927 ..	186,543	9·73

\* Influenza year.

The distribution of fever deaths is shown in Annual Form No. IX. In the Presidency as a whole all the Registration Districts show a decrease of fever deaths over the figures for the previous year with the exception of Sholapur, Ratnagiri and Kanara collectorates. The highest death-rates were recorded in Thar and Parkar (15·77), Ahmedabad (14·87), East Khandesh (13·18), Larkana (12·98), Nawabshah (12·92), Panch Mahals (12·76), Broach (11·91), Nasik (11·63), Sukkur (11·44), Kanara (11·43), Sholapur (11·24) and Satara (10·81).

The urban death-rate was 6·16 and the rural 10·60 as compared with 7·84 and 12·52, respectively, in 1926. The highest urban death-rates for the Presidency proper were recorded in Ankleshwar (19·23), Dholka (18·54), Viramgaon (17·26), Anand (16·96), Godhra (15·61), Dohad (15·06), Borsad (14·94), Sholapur (14·87), Yeola (14·09), Nasirabad (13·62), Dhandhuka (13·53), Mehmedabad (13·47), Nadiad (13·28), Kapadvanj (12·91), Guledgud (12·47), Chalisgaon (12·27), Barsi (11·50), and Pandharpur (11·38), and in Sind, Garhiyasin (18·66), Ratodero (18·51), Nawabshah (17·69), Tatta (15·34), Kambar (14·98), Matiari (14·88), Mirpurkhas (12·14), and Sukkur (11·75).

Details of sub-headings of deaths from fevers are as follows:—

32. *Malaria*.—45,641 deaths were recorded against 54,224 in 1926. The figures are for Sind 29,663; Southern R. District 6,137; Central 4,809; Western 3,849 and Gujarat 823 as compared with 35,433; 6,652; 5,899; 4,594 and 1,048, respectively, in 1926. 360 deaths were registered in Bombay City against 598 in 1926. The decrease in the total figure for the Presidency is, therefore, chiefly due to an improvement in Sind. The fall in Gujarat follows a steady rise for the last 5 years.

The death-rate from malaria for the Presidency as a whole was 2·38 against 2·83 in 1926. Excluding Sind, the rate was 1·00 against 1·18 in 1926. The urban and rural death-rates were ·84 and 2·76 respectively as compared with 1·13 and 3·24 in 1926. As usual the rural death-rates are considerably higher than urban. The highest rural death-rates from malaria were recorded in Sind. Thar and Parkar shows a rural death-rate of 10·86; Sukkur 10·58; Nawabshah 10·47;



Larkana 10·32; Karachi 10·19; Upper Sind Frontier 9·88 and Hyderabad 9·67. Except Karachi, all rural districts showed a lower incidence of malaria during the year as compared with the previous year. By urban circles, the highest death-rates were recorded in Garhiyasin (17·10), Mirpurkhas (11·79), Rohri (10·28), Kotri (9·04), Tatta (7·91), Umarkot (7·85), Tando Adam (7·71), and the lowest in Sukkur (·02) and Karachi (·09). No deaths were recorded in Jacobabad town.

In the Presidency proper, Kanara (3·69), Poona (2·98), Dharwar (2·65), Ahmednagar (2·35), Nasik (2·07), Belgaum (1·96), and Thana (1·33), returned the highest rural rates and the rates for Dholka (14·07), Jambusar (8·32), Umreth (5·85), Karwar (3·87), Malegaon (3·71), Lonavla (3·45), Chalisgaon (3·09), Surat (2·78), Bassein (2·60), Panwel (2·32), and Bijapur (2·25) were the highest for towns.

33. *Anti-malarial Measures.*—For the treatment of sufferers, 53 Subordinate Medical Service Officers were appointed on special duty—10 for Ahmedabad; 4 each for Kanara, Karachi and Hyderabad; 3 each for Thana, Panch Mahals, Kaira, Thar and Parkar and West Khandesh; 2 each for Poona, Dharwar, Broach and Larkana and 1 each for Kolaba, Nasik, East Khandesh, Satara, Ratnagiri, Belgaum, Nawabshah and Jacobabad districts.

In Sind, during the period September 1927 to February 1928, 998 villages were visited by 15 S. M. S. Officers. 32,590 malarial patients and 7,899 other patients were treated by them. During the year under report, in all 135,136 malarial patients were treated at the various Civil Hospitals and Dispensaries in Sind—Karachi 38,103; Hyderabad 16,804; Thar and Parkar 11,480; Nawabshah 19,919; Larkana 28,876; Sukkur 13,577; and Upper Sind Frontier 6,377.

In order to obtain some precise information regarding the conditions favouring malaria in important parts of Sind, the Director of the Malaria Survey of India was asked to carry out a survey of the Larkana District and Sukkur, Shikarpur and Garhiyasin talukas of the Sukkur district. Accordingly Lieut.-Colonel McCombie Young, I.M.S., was appointed by the Director, and was engaged on the survey throughout the year. His report is expected shortly.

The appointment of a District Health Staff for the Larkana district is under consideration. The staff would carry out anti-malarial measures in addition to attending to Public Health work in general.

In the Southern R. District, 671 villages were visited by 7 S. M. S. Officers—1 for Belgaum, 2 for Dharwar, and 4 for Kanara. Out of a total of 10,584 cases treated by them, 7,536 were malaria. Out of 6,096 children examined, 3,070 were found to have enlarged spleens.

Exceptional conditions prevailed in the Kaira district as a result of the floods which occurred during the last week of July 1927. The Civil Surgeon reports that he anticipated a virulent outbreak of malaria and as soon as communication with the outside world permitted, the Assistant Director of Public Health, Gujarat, was written to and the medical



officers in charge of dispensaries were directed to see to the sanitation of the flooded areas in consultation with the local administrative authorities. Three S. M. S. Officers were requisitioned and the district divided among them for anti-malarial measures. These officers were supplied with the necessary quinine and other drugs, etc. The prevailing type of malaria was malignant tertian as elicited by blood examination made at the Civil Hospital. The work carried out in the district, of which the Assistant Director of Public Health, Gujarat, was informed from time to time, did much to lessen the sufferings of the people of the district.

The following measures are being adopted in the forest tract of the Dangs as the result of a survey carried out by the Assistant Director of Public Health in 1925. In addition to the existing Dispensary and medical establishment at Ahwa, it is proposed to open a dispensary at Waghai at present and to keep a Junior Medical Officer permanently stationed at that place. The appointment of this officer is to be made at once pending the construction of the buildings. In course of time, additional dispensaries will be provided at Subir and Galkund and the staff increased by two medical officers.

The Committee appointed by Government in 1926 to consider and advise on what steps should be taken to rid Bombay City of malaria continued its work throughout the year. Four meetings were held. Among other recommendations, it was suggested that a fresh survey of the City should be carried out, conditions having probably changed materially since the original survey made by Dr. Bentley 15 years ago.

*Distribution of Quinine.*—During the period under report, Government sanctioned (1) Rs. 50,000 for free distribution of quinine, (2) Rs. 50,000 for sale of quinine at post offices, and (3) Rs. 20,200 for the cheap sale of quinine treatments.

Out of the first grant, Rs. 34,403 were spent on supplying quinine to the public in the Presidency through the Revenue and other officials, quinine worth Rs. 10,600 being distributed among school children in Sind by the Educational Department. Quinine was also distributed by the Assistant Directors of Public Health, Inspectors of Sanitation and Vaccination and selected vaccinators.

Out of the 2nd grant, Rs. 36,610 were spent in supplying quinine powder for sale at post offices. The Superintendents of Yeravda and Hyderabad Central Prisons credited a total amount of Rs. 32,888 realised from the sale into the Government Treasury.

Out of the 3rd grant, Rs. 8,846 were spent in purchasing parcels of quinine treatments from the Medical Store Dépôt. The price recovered from the Officers of the various Departments amounted to Rs. 5,363.

All work in connection with the manufacture and distribution of quinine tablets has now been taken over by the Yeravda Central Jail.

Reports received from Collectors throughout the Presidency indicate that the policy of distribution of quinine in this way is greatly appreciated by the public. It places quinine within the reach of thousands who would otherwise be unable to obtain it and must relieve an enormous amount of suffering by cutting short acute attacks of fever. For this reason alone, it may be considered a valuable measure though other chances of permanent cures may be small, and its prophylactic effect nil.

34. *Flood and Rain.*—In Gujarat and in Sind, very heavy rains occurred during the last week of July and the first week of August 1927.

Immediately the floods had subsided, the Assistant Director of Public Health, Gujarat Registration District, issued circulars to the Presidents of District Local Boards and municipalities embodying instructions for cleaning up villages, disinfection of water-supplies, disposing of dead animals, and treating stagnant water.

Vaccinators and Inspectors of Sanitation and Vaccination were entrusted with the regular inspection of villages, sterilization of water-supplies and other sanitary measures. Three hundred and twelve villages of Ahmedabad, 273 of Kaira, 126 of Broach and 110 of Panch Mahals districts were visited by them for the purposes of noting and reporting on the general health conditions, permanganating drinking water wells, distribution of quinine and advising in general on removal and disposal of carcasses and rubbish from these villages.

Members of the Legislative Council representing flood-affected areas were invited to meet the Director of Public Health and to discuss the situation created by the floods.

The members of the Excise and Police Departments were entrusted with the work of cleaning up villages by the Collector of Kaira district.

The officiating Director of Public Health issued a note on “The dangers of floods to Public Health.”

Dispensary Medical Officers were directed by the Surgeon General to send regular reports of the prevalence of diseases in dispensary towns and villages. A medical officer was appointed by this department to tour in the affected parts of Kaira district.

The following talukas were most affected by floods :—

Taluka.	District.		Taluka.	District.
Daskroi	.. Ahmedabad.		Thasra ..	.. Kaira.
Sanand	.. ..		Mehmedabad	.. ..
Viramgaon	.. ..		Matar ..	.. ..
Dholka	.. ..		Nadiad ..	.. ..
Dhandhuka	.. ..		Anand ..	.. ..
Jambusar	.. Broach.		Kapadvanj	.. ..
Amod	.. ..		Borsad ..	.. ..

The religious festivals at Dakore fell due in August and as the town was in a highly insanitary state after the floods it became a matter of serious concern whether to permit or prohibit pilgrimages. Out of deference for the religious feelings of the people, these fairs were not



prohibited. They were attended by 18,000 to 20,000 pilgrims. The medical and sanitary arrangements were controlled by the Assistant Director of Public Health personally, two special medical officers being sent to help him, and the fairs passed off without any epidemic occurring.

242,100 five-grain quinine tablets were supplied for free distribution to the Collectors of Broach, Kaira, Ahmedabad and Panch Mahals and the Assistant Director of Public Health, Gujarat Registration District.

It may be stated that the escape Gujarat had from diseases like enteric fever, dysentery and cholera has been remarkable and is due to no small extent to the prompt action taken by the local authorities and the excellent co-operation received from them.

In Sind, the following talukas of Thar and Parkar and Hyderabad districts were seriously affected by floods :—

Taluka.	District.	Taluka.	District.
Mirpurkhas	.. Thar and Parkar.	Guni	.. Hyderabad:
Samro	.. ..	Dero Mohbat	.. ..
Jamesabad	.. ..	Badin	.. ..
Digri	.. ..	Tando Bago	.. ..
Umarkot	.. ..	Tando Allahyar	.. ..

Necessary measures were suggested to the Collectors and Presidents of the Local Boards of the respective districts. Advice on the malaria preventive measures was given to the above mentioned officers and general instructions regarding prevention and cure of malarial fever and use and dosage of quinine, etc., were supplied to all Collectors.

Nine S. M. S. Officers including 1 honorary medical officer (M.B.B.S.) were working on anti-malaria duty, 4 in Thar and Parkar, 2 in Hyderabad and 3 in Karachi districts.

In September, these medical officers visited 128 villages, the total number of persons treated by them being 7,444 (6,640 for malaria). Out of 937 children examined, 308 were found with enlarged spleens.

The Assistant Director of Public Health, Sind Registration District, visited Mirpurkhas, interviewed the Collector of Thar and Parkar and suggested sanitary measures. He also inspected the sanitary condition of Mirpurkhas town in company with the Chief Officer and the Vice-President of the municipality. He toured in the Tando Division visiting Badin and Tando Bago and interviewed the chief Revenue Officials in the talukas of Tando Mahomed Khan and Matli. As a result of the tour, it was found that health conditions were normal and if anything better than usual for the time of the year.

35. *Enteric Fever*.—1,976 of the “Fever” deaths were registered as due to Enteric as against 2,276 in 1926. The accuracy of death figures allocated to this sub-head especially, in rural areas is not to be relied on. The figures are, for the Southern Registration District 1,164 ; Central 438 ; Sind 226 ; Gujarat 11 and Western 3 as compared with 1,265 ; 511 ; 342 ; 31 and 3 respectively in 1926. 134 deaths were recorded in Bombay City against 124 in the previous year. Among

town circles the highest number of deaths were recorded in Poona City (42), Belgaum (31), Dharwar (27), Hyderabad (57), Karachi (51) and Shikarpur (37).

In Hyderabad Sind, typhoid fever was made a notifiable disease from November 11th up to December 31st. Twenty-two cases had been reported by various practitioners of the town.

The Assistant Director of Public Health visited the city in November and as the result of his investigation concluded that the disease is endemic there, being most prevalent in the months of April, May, October and November.

The Assistant Director of Public Health, Sind, reports :—

The Health Officer, Karachi Municipality, says in his report that “it is a well known fact that the ground level in many parts of the city is near to high-tide level, subsoil water remains so very high that it is a problem of considerable complexity to lower it. To add to the evil, after rainfall municipal sewers overflow continually for a number of days, thereby creating conditions favourable for the spread of Enteric Fever, by such sewage or subsoil water finding its way into leaky domestic service pipes.”

There were 8 deaths from Enteric Fever among Europeans of which 7 occurred in Bombay City and 1 in Karachi City. Six deaths occurred among Anglo-Indians of which 5 were from Bombay City and 1 from Dharwar district.

36. *Measles*.—3,253 deaths were registered against 7,146 in 1926. The Central Registration District recorded the highest number of deaths—1,706 ; Western 644 ; Southern 629 ; Sind 91 and Gujarat 88 ; as compared with 1,137 ; 956 ; 1,280 ; 1,415 ; and 2,234 in 1926. In Bombay City 95 deaths were recorded against 134 in 1926. The highest death-rates for urban areas were recorded in Jalgaon (2·41), Manmad (1·43), Baramati (1·43), Sholapur (1·25), Poona City (1·22), Barsi (·95), Belgaum (·94), Gokak (·90), Satara (·89), and Gadag-Bettigeri (·87). Ahmedabad city returned 10 deaths under this heading as compared with 774 during the previous year. It is not likely, however, that this low figure will be maintained. The deaths since 1919 have been :—

Year.	Number of deaths.	Year.	Number of deaths.
1919 .. ..	764	1923 .. ..	1,254
1920 .. ..	30	1924 .. ..	172
1921 .. ..	620	1925 .. ..	259
1922 .. ..	48	1926 .. ..	774
		1927 .. ..	10

37. *Relapsing Fever*.—No death was reported from this cause during the year.

At the request of the Criminal Tribes Settlement Officer, Dharwar, short notes on the prevention and treatment of Relapsing Fever were drawn up and sent to him by the Assistant Director of Public Health, Southern Registration District.

*Kala-Azar*.—No death from this cause was reported during the year.



*Influenza*

38. A review of the Influenza mortality from 1918 shows this year's epidemic to have been the mildest of all, second only to that of 1925, the total number of deaths recorded during the year being 267 against 362 in the preceding year. Out of these, Bombay City recorded 78 deaths against 87 in 1926.

The following table shows the estimated number of deaths from Influenza for the first two years since its appearance and as registered thereafter :—

Year.	Number of deaths.	Year.	Number of deaths.
1918 .. ..	1,041,481	1923 .. ..	991
1919 .. ..	39,786	1924 .. ..	578
1920 .. ..	16,690	1925 .. ..	192
1921 .. ..	3,679	1926 .. ..	362
1922 .. ..	1,222	1927 .. ..	267

Seventy-nine deaths were reported from 8 villages of Halol taluka, Panch Mahals district. Out of these, 54 deaths were reported from Shivrajpur Mines in Halol taluka and 25 from Baman Kuva Mines in the same taluka.

The Medical Officer of Shivrajpur Mines states : “ The infection was located in the Mine Camp. Cases were all indigenous. Fumigation and disinfection of the quarters, floor, walls and roofs, etc., was carried out and clothes, etc., were exposed to direct sun heat.” The Assistant Director of Public Health visited these Mines and inspected the arrangements made by the authorities and advised measures to check the spread of the disease.

Two deaths were returned from each of the cities of Ahmedabad and Surat.

Peint Taluka of Nasik district recorded 45 deaths in the months of April and May against 86 in the preceding year. The Medical Officer in charge of the dispensary visited the affected villages as far as his duties permitted. There were small outbreaks in Thana district.

In the Southern Registration District, 27 deaths were recorded against 78 in 1926. Belgaum, Dharwar, Bijapur and Kanara districts returned 1, 17, 4 and 5 deaths, respectively.

In Sind Registration District, 26 deaths were recorded against 20 in 1926. Out of these 8 deaths were reported from Karachi City. Larkana and Sukkur districts each reported 9 deaths.

In connection with the epidemic of Bombay City, the Executive Health Officer, reports :—

“ The type of the disease was mainly respiratory but some cases of abdominal type were also seen. Leaflets instructing the public what to do for the prevention of the disease were distributed and they were advised to avail themselves of the medical relief afforded at the Municipal Dispensaries and Hospitals. Influenza vaccine was not used.”

*Encephalitis Lethargica.*—Two cases of this disease were reported from Ahmedabad City in February—one imported from Nadiad, the other in the Indian Military Hospital.

*Respiratory Diseases*

39. There was a considerable decrease in mortality from Respiratory Diseases as compared with the previous year, the total deaths recorded being 87,963 (47,762 males and 40,201 females) against 103,038 in 1926, and 88,841 the mean of previous five years.

The mortality list for previous years is as follows :—

Year	Deaths	Rate	Year	Deaths	Rate
1901-1910 mean ..	57,723	3·12	1921 .. ..	93,336	4·87
1911-1915 mean ..	62,181	3·17	1922 .. ..	82,682	4·31
1916 ..	79,882	4·08	1923 .. ..	84,334	4·40
1917 ..	90,667	4·63	1924 .. ..	91,103	4·75
1918 ..	119,680	6·11	1925 .. ..	83,047	4·33
1919 ..	98,633	5·04	1926 .. ..	103,038	5·38
1920 ..	96,486	4·93	1927 .. ..	87,963	4·59

The increase over the years preceding the Influenza pandemic (1918) is attributed partly to the actual number of deaths and partly to improved registration of deaths by causes.

The death-rate was 4·59 against 5·38 in 1926 and a quinquennial mean of 4·63. The urban rate (7·98) greatly exceeds the rural (3·77) as compared with 9·50 and 4·38 in 1926.

The death-rate under this heading is still with the exception of “ Fevers ” and “ Other Causes ” the highest in the Presidency.

Gujarat Registration District recorded the highest number of deaths—23,406 ; Central 20,907 ; Western 16,209 ; Southern 10,271 ; and Sind 5,706 ; as compared in that order with 30,419 ; 22,039 ; 19,525 ; 11,034 ; and 6,633 in 1926. Bombay City recorded 11,464 deaths as against 13,388 in 1926.

The highest rates were returned from the collectorates of Kaira (9·66), Surat (9·46), Broach (7·81), Ahmedabad (7·56), Poona (6·03), Ahmednagar (5·26), Ratnagiri (5·02), Karachi (4·79), Nasik (4·91), Kolaba (4·81), East Khandesh (3·80), Belgaum (3·71), Thana (3·66), Sholapur (3·40), Dharwar (3·14), West Khandesh (3·16), and Bijapur (3·01). Bombay City recorded a death-rate of 9·98 from this cause as compared with 11·65 in the year preceding.

Urban areas recorded much higher rates than rural, the result of congestion and consequent facility for spread of these diseases and probably also to more correct allocation of deaths under this head. There is a great need for better education in the methods of prevention of these diseases, for the relief of congestion in the big towns, and the provision of greater facilities for treatment.

The highest rates for urban areas were recorded in Umreth (17·61), Ahmedabad (14·23), Kirkee Cantonment (14·14), Poona City (13·47), Surat (12·73), Viramgaon (12·04), Junnar (11·93), Umarkot (11·70), Dakore (11·01), Jambusar (10·87), Karachi (10·57), Hyderabad (10·01), Nasik (9·95), Kaira (9·79), Nadiad (9·47), Pandharpur (8·13), Satara (7·96), Nagar (7·21).



40. *Phthisis*.—20,905 deaths from this cause were registered equal to a death-rate of 1·09 for the Presidency as a whole. The corresponding figures for 1926 were 21,892 and 1·14 respectively. By Registration Districts, the total figures were Central 6,048 ; Western 5,307 ; Gujarat 4,339 ; Southern 2,633 ; and Sind 1,021, as compared with 5,950 ; 5,460 ; 5,168 ; 2,655 ; and 1,120 respectively in the previous year. In Bombay City phthisis deaths were 1,557 equal to a death-rate of 1·36 compared with 1,539 or a death-rate of 1·34 in the previous year.

The urban death-rate was 1·75 and the rural 0·93 against 1·83 and 0·97 respectively in the previous year. The highest death-rates for urban areas were recorded in Rander (4·65), Ilkal (4·55), Dharangaon (4·25), Navalgund (4·22), Junnar (4·20), Ranebennur (3·95), Dhulia (3·92), Ahmedabad (3·80), Poona City (3·67), Kirkee Cantonment (3·13), Belgaum (2·95), Gokarn (2·89), Ratnagiri (2·84), Chiplun (2·82), Dhulia (2·73), Surat (2·72), Nasik (2·53), Hyderabad (2·41) and Karachi (2·36).

The highest death-rates for rural areas were recorded in the districts of Kolaba (2·97), Ratnagiri (2·63), Kaira (1·77), Thana (1·50), and Ahmedabad (1·17).

Of the 265 deaths recorded from phthisis in the Kanara district 178 occurred in the below-ghat and the remaining 87 in above-ghat talukas. Although the below-ghat or sea-coast talukas are generally considered healthier than the above-ghat ones, death-rate is higher in the former than in the latter. The probable explanation of this has been given in previous reports and lies in the fact that the large number of labourers in Bombay mills is recruited from the below-ghat talukas. The high cost of living in Bombay added probably to the unhealthy environments under which the poor classes have to live and work there, are conditions which are likely to favour contracting such diseases. Once infected and unable to work, they return to their native villages where they die and thus swell the deaths under phthisis in below-ghat talukas.

These remarks would apply also to Ratnagiri, Kolaba and Thana districts which supply labour to Bombay City.

In Hyderabad town, 175 deaths from consumption were recorded during the year under report as against 224 in 1926 and 240 in 1925. Definite attempts to reduce the spread of the disease have been made by the municipality who have opened a Tuberculosis dispensary and appointed an officer from 1st May 1926 to attend to all tubercular patients in their houses free of charge as well as to patients attending the dispensary. As usual magic lantern lectures on consumption, etc., were given to ladies in the different parts of the city. Disinfection of houses where consumptives were reported to have died, was also carried on throughout the year.

*Tuberculosis Institutions*.—The Anti-Tuberculosis Dispensary in Karachi continues to do good work. During the year under report, 16,886 patients were treated. Of these 12,203 were definitely tuberculosis while 4,683 were kept under observation or suspected of tuberculosis. 595 new patients were admitted during the year as against 1,049 in 1926.

In Hyderabad town 891 patients were treated at the K. T. Tuberculosis Dispensary. Of these, 312 were definitely tuberculosis while 579 were kept under observation and suspected of tuberculosis. Out of the 891 patients admitted during the year, 353 were males, and 319 females, 131 male children and 88 female children. Amongst these 891, 162 were Mahomedans and 729 Hindus.

41. *Pneumonia*.—18,289 deaths were registered equivalent to a death-rate of 0·95 per mille of population for the Presidency as a whole. The corresponding figures for 1926 were 20,654 and 1·08 respectively. Sind Registration District recorded the highest number of deaths—3,681; Gujarat 3,310; Western 1,975; Central 1,428; and Southern 431; as compared with 4,280; 4,098; 1,854; 1,655; and 228 respectively in 1926. Bombay City registered 7,464 pneumonia deaths—against 8,539 in 1926.

The urban death-rate was 3·30 and the rural 0·39 against 3·79 and 0·42 respectively in 1926. Amongst the highest urban death-rates were those of Kirkee Cantonment (7·51), Poona City (7·00), Nadiad (6·39), Hyderabad (6·24), Surat (5·82), Bulsar (5·69), Karachi (5·04), Nasik (5·03), Kotri (4·50), Mirpurkhas (3·29), and Lonavla (3·15), while the highest rates for rural areas were recorded in the districts of Surat (1·97), Thar and Parkar (1·85), Bombay Suburban (1·45), Broach (1·17), and Hyderabad (1·11).

### *Cholera*

42. A severe epidemic of cholera prevailed from March to November and resulted in 26,153 deaths. In 1925 and 1926 there were 57 and 73 deaths respectively and an outbreak comparable with the present one has not occurred since 1919 when a wide spread epidemic resulted in over 50,000 deaths. Previous bad cholera years were 1912 (64,500), 1909 (28,700), 1906 (46,000) and 1900 (163,200).

Although the disease appeared to have died out after 1924 cases did actually occur during the next two years as shown above and these cases though few in number were not confined to any one part of the Presidency.

Sir Leonard Rogers has recently enunciated a theory to account for the recrudescence of cholera epidemics which is based on the following factors.

An absolute humidity figure of less than ·4.

Scarcity of water following on failure of the preceding late rains.

A freedom from outbreaks during the preceding few years, and,

Fairs and pilgrimages.

All these factors were operating on the present occasion. We have seen that during the preceding two years the Presidency was almost but not quite free from the disease. There was a scarcity of water in many of the worst affected areas, as a result of the failure of the late monsoon of 1926, while the absolute humidity figure in the Deccan and Karnatak—the worst affected areas is favourable after the month of March, on the standard fixed by Rogers.



Fairs are also common at this season and played their part on this occasion.

Practically all collectorates in the Presidency proper were affected except Broach, Kaira, and Panch Mahals, while in Sind 3 out of the 7 collectorates also escaped. But the heaviest infection occurred in the Southern (14,063), Central (9,637) and Western (2,161) Registration Districts.

The first appearance of the epidemic was noticed on February 12th at a place called Garag, a small village about 12 miles from Dharwar. This was a localised outbreak of no great severity which soon subsided but the origin of which inspite of careful enquiry could not be traced. Cholera prevailed at the time in Madras and parts of the Nizam's Territory, but not adjacent to this Presidency.

The next infection appeared a month later on March 15th at Sogal, a small fair centre in Parasgad taluka of Belgaum district attended by about 2,000 people. Here a spring of water, the only supply, appears to have been polluted temporarily possibly by a carrier but whether from Garag or not is unknown and a number of cases suddenly occurred, infection being spread to many neighbouring villages principally in the Belgaum district by the returning pilgrims. A fair on a much larger scale took place at Yamnur in the Dharwar district on 28th of the month and was attended by 80,000 people from Belgaum, Dharwar and Bijapur districts, the Madras Presidency, and Hyderabad and Mysore States.

Owing to failure of the late rains in 1926, there was some scarcity of water at this fair, but what there was, was permanganated and carefully looked after. The first case occurred on March 28th among pilgrims from Hyderabad but others rapidly followed and the fair was stopped. Widely scattered outbreaks then rapidly ensued throughout the Dharwar, Belgaum and Bijapur districts already infected from the previous focus at Sogal.

Early in April, infection reached the Satara district of the Central R. District through the Sangli State, the source of infection being the stagnant water of the Varna river which runs through the Southern Maratha States and Satara district. The talukas of Shirala and Tasgaon were soon affected, but a fair held at Shirala about this time under the control of the Assistant Director of Public Health, Central Registration District, produced no cases.

Subsequently the Sholapur, Poona and Ahmednagar districts became infected.

The Western Registration District escaped more lightly than the other two, the first cases occurring in a village of East Khandesh during July (9th.)

It is situated on the banks of a tributary of the Tittur river which joins the Girna river through Chalisgaon. On the 23rd of the month, cholera was reported from Chalisgaon and then spread along the Tittur and Girna rivers and subsequently to other parts of the Division. Details of the various out-breaks are given below.

Preventive measures included inoculation by 14 special medical officers appointed for the purpose and by Dispensary and Hospital Medical Officers and private practitioners, over 95,000 persons being inoculated; purification of water-supplies by these medical officers and by Inspectors of Sanitation, distribution of Tomb's Mixture and potash permanganate pills broadcast and the experimental use of Bilivaccine.

Cholera was responsible for 26,153 deaths against 73 in 1926 and 57 in 1925—the two remarkable record years for absence of cholera. Of this total number, 13,761 were males and 12,392 females. The death-rate per 1,000 of population was 1·36, the quinquennial mean being 0·21.

The following table gives the deaths recorded since 1900:—

Year.			Deaths.	Year.			Deaths.
1900	..	..	163,200	1914	..	..	17,779
1901	..	..	13,600	1915	..	..	377
1902	..	..	3,229	1916	..	..	19,841
1903	..	..	1,825	1917	..	..	17,003
1904	..	..	13,156	1918	..	..	8,834
1905	..	..	5,396	1919	..	..	51,551
1906	..	..	46,119	1920	..	..	2,047
1907	..	..	7,656	1921	..	..	3,521
1908	..	..	1,759	1922	..	..	2,768
1909	..	..	28,714	1923	..	..	9,221
1910	..	..	3,694	1924	..	..	8,236
1911	..	..	5,817	1925	..	..	57
1912	..	..	64,505	1926	..	..	73
1913	..	..	5,134	1927	..	..	26,153

*Distribution.*—*Vide* Annual Form No. VII. In the Presidency proper, all the collectorates with the exception of Broach, Kaira and Panch Mahals were more or less affected, while in Sind 4 out of the 7 districts reported deaths. The epidemic was chiefly confined to the districts of Belgaum (7,575 deaths), Dharwar (3,613), Bijapur (2,694), Satara (4,070), Sholapur (3,502), Poona (1,233), Ahmednagar (821), and East Khandesh (1,298). Bombay City recorded 80 deaths. It prevailed to a greater or smaller extent in 186 Registration circles infecting 2,667 villages. The epidemic reached its height in April, during which 5,772 deaths occurred and had practically ceased by November.

43. To take the registration districts separately, their history is as follows:—

The heaviest incidence of cholera was in the Southern Registration District. It was responsible for 14,063 deaths against 5 in 1926 and 4 in 1925—the two record years for absence of cholera. Of this total number, 7,636 were males and 6,427 females. The total ratio of deaths per 1,000 of population was 4·42 and that for male and female deaths separately being 4·71 and 4·12. The quinquennial mean ratio was ·42. This epidemic of cholera contributed 14 per cent. of the total mortality of the year. It prevailed in all the four districts in the Division, Belgaum district being the worst and Kanara the least affected. It prevailed to a greater or lesser extent in 78 per cent. of town circles,



and 82 per cent. of rural circles infecting 28 per cent. of total number of villages, throughout the Division. The epidemic broke out in virulent form, in March, reached its climax in April and then began to decline. It had practically disappeared by October.

In Belgaum district it affected all the rural and town circles except Begaum Cantonment, infecting 504 villages out of the total number of 1,069. The epidemic practically extended from March to September recording 7,575 deaths equal to a death-rate of 7.97. The rural circles of Murgod and Sampgaon and Nipani town among the town circles were the worst infected recording a death-rate of 18.09, 17.49 and 10.61 respectively. The first case occurred on 16th March. Source of general infection was partly Sogal Fair and partly Yamnur Fair. It thus received a severe infection from both sides, which greatly contributed to the severity of the epidemic. In Dharwar district the epidemic extended from February to September recording 3,613 deaths and a death-rate of 3.49. Three hundred and ninety-nine out of the total number of 1,277 villages were affected. All rural and town circles were affected, the highest death-rates of 8.95 and 6.68 being recorded in Hangal and Kod talukas among the rural circles. Among the town circles Gadag-Bettigeri was the worst infected returning a death-rate of 3.35. The first case occurred in Garag village on 23rd February but the epidemic in the district may, however, be taken as originating from the infection from Sogal on 17th March and from Yamnur on 22nd March. In Bijapur district the course of the epidemic varied. After reaching its climax in April and then assuming its downward trend, it again rose considerably in the middle of July. This was probably due to the effects of great pilgrim movements in the adjoining districts. First case occurred on 25th March, source of infection being Yamnur. It was responsible for 2,694 deaths and a death-rate of 3.38. All rural and town circles were infected, the highest ratio of 7.22 and 5.46 being recorded from Bilgi and Badami rural circles and 6.47 from Bagalkot town, respectively. Three hundred and seventy-three villages out of a total number of 1,128 were infected. Kanara was the least affected district in the Division where only 181 deaths equivalent to a small ratio of .45 were registered. Five rural and one town circles and 42 villages of the total number of 1,264 were infected. The epidemic continued to a more or less extent from March to July. The source of infection was from Dharwar district.

*Preventive.*—The total number of anti-cholera inoculations in the Southern Registration District was 52,321.

*Curative.*—The total number of patients treated by doctors and Inspectors of Sanitation and Vaccination with various kinds of treatments was 5,475, 4,080 of whom recovered.

The Assistant Director of Public Health states that “It is the first time in the records of this Division or perhaps Presidency that within a short time, this Department succeeded in protecting such a large number of people against cholera with well over 53,000 by anti-cholera inoculations.”



Next to Southern, Central Registration District, was badly affected, 9,637 deaths being recorded. The death-rate was 2·08. In all 995 villages and towns were affected. Cholera prevailed in all the five districts in the Division, Sholapur and Satara districts being the worst and Ratnagiri the least affected. The infection first entered this Registration District from the Southern Division in Satara district *via* Sangli State. The Southern extremity of Satara district borders on and is interlaced with the Southern Maratha States. The Varna river intervenes between Kolhapur State and the Walwa taluka of Satara district. The Tasgaon taluka is interlaced with Sangli, Miraj Senior and Junior and Aundh. The source of infection was the water-supply from the stagnant Varna river which is common to the Native States, and Satara district villages, and also the bazaar villages which spread the infection to all villages from which people attended the same. In Satara district infection was first reported in Ashta town on 2nd April 1927 and was brought from Sangli. The villages in Walwa, Shirala and Tasgaon talukas which were affected in the beginning received infection from the Native States. A fair was held at Shirala in the last week of April. There was no cholera nor did infection spread to other villages through the returning pilgrims. The epidemic showed signs of decline by the end of May but began to rise again after the rains. It reached its maximum in the month of August, and then gradually declined. Four thousand and seventy deaths were recorded equal to a death-rate of 3·97 per mille of population. All the rural and town circles were affected, while 389 villages reported deaths. The highest death-rates were recorded in the rural circles of Tasgaon (8·18), Walwa (6·25), Khanapur (6·28), Koregaon (6·09), Khataav (5·68) and Shirala (5·64). Ashta town reported the highest death-rate (11·54). In Sholapur district, village Degaon in Sholapur taluka was first infected. Three thousand five hundred and two deaths were reported equal to a death-rate of 4·72. All the Registration Circles were affected and 290 villages reported deaths. Barsi, Karmala, Madha and Sholapur talukas suffered badly, having death-rates of 8·55, 7·88, 6·11 and 4·21, respectively. Pandharpur town recorded the highest rate—8·45 and Barsi 5·75. The epidemic reached its maximum in July-August and then gradually declined.

In Poona district, there were 1,233 deaths from cholera equal to a death-rate of 1·25. During the week ending 2nd April 1 stray case of cholera was reported in Indapur taluka. This taluka borders on Sholapur district. The infection was said to be local. In April, cases were reported from Mulshi Budrak. In May the infection began to spread. The epidemic reached its maximum in July and then gradually declined. Sixteen Registration Circles with 164 villages were affected. Indapur and Haveli talukas suffered badly. In Ahmednagar district, a fair was held at Deodahitne in Jamkhed peta in May. Cholera broke out there. Other villages in the peta were affected through returning pilgrims. Infection was also received from H. E. H. The Nizam's Dominions. Though cases were reported from Nagar and Shrigonda talukas, the main infection was confined to Jamkhed, Sheogaon and Pathardi,



till the end of June. All these border on H. E. H. The Nizam's Dominions and were comparatively badly affected. In all 13 Registration Circles with 148 villages were affected and returned 821 deaths equal to a death-rate of 1·13. The epidemic reached its maximum in August and then declined gradually. In Ratnagiri district, Vengurla town and 3 villages in Vengurla peta and Chiplun taluka were affected and returned 11 deaths.

In addition to the usual precautionary measures against cholera special measures were adopted. The total number of anti-cholera inoculations done in the Central Registration District was 27,327.

The Western Registration District follows the Central in point of severity of cholera. There were 2,161 deaths equal to a death-rate of ·54. All the collectorates were more or less affected to the extent of 59 Registration Circles with 324 villages. Cholera was first reported in East Khandesh from Nagardeola village of the Pachora taluka on 9th July 1927. This village is situated on the banks of a tributary of the river Tittur. The river runs through Chalisgaon taluka towards north-east and joins the Girna river in Pachora taluka near Bamrud. Cholera was reported from Chalisgaon on 23rd July 1927 and subsequently from the 3 villages in Chalisgaon taluka which are all on the Tittur river. Later cholera broke out in the villages in Pachora taluka which are also situated on or near the Tittur and Girna rivers. From the dates on which cholera broke out in the different villages, it would seem that the infection which originated at Chalisgaon and Nagardeola had travelled along the Tittur river and infected the Girna. This river had in its course carried the infection further towards north. There was a history of pilgrims having returned to Chalisgaon from Pandharpur a few days before the date of infection, but there was not sufficient evidence to show that the disease was imported by them. Further the disease spread through all the talukas of the East Khandesh district as the infection travelled from one river to the other. The epidemic thus spread all over the district due to the infection of rivers and other water-courses. It is not easy to say how the infection was first introduced. Cholera prevailed in other parts of the Presidency during the earlier part of the year and owing to inter-communications this Division was threatened with its advent at any time. Once the disease was introduced in different parts simultaneously as happened in East Khandesh, there were several factors responsible for its spread.

East Khandesh was the worst affected of all districts. There were 1,298 deaths equal to a death-rate of 1·27 per mille of population. The disease appeared in 13 rural and 8 town circles and was reported from 171 towns and villages. Highest death-rates for rural circles were recorded in Jamner (2·94), Pachora (2·22), and Erandol (2·00) while for urban circles Nasirabad and Bhusawal recorded the rates of 4·27 and 2·57, respectively. In Nasik district, the disease appeared in 9 rural and 3 town circles and 1 Cantonment and was reported from 53 villages. Two hundred and ninety-two deaths were recorded, the death-rate being ·35. In West Khandesh, the disease appeared in 5 rural and 2 town



circles and was reported from 38 villages. One hundred eighteen deaths were registered or a ratio of  $\cdot 19$ . Thana district reported 189 deaths or a ratio of  $\cdot 25$ . Seven Registration Circles were affected while 22 towns and villages reported deaths. North Salsette taluka recorded the highest death-rate of  $3\cdot 26$ . Bassein town reported 16 deaths. Eleven deaths were recorded in Bombay Suburban district. South Salsette taluka and Kurla town were affected, recording 3 and 7 deaths respectively, while Bandra town reported only 1 death. In Kolaba district, the disease appeared in 8 Registration Circles and was reported from 37 villages. There were 253 deaths or a ratio of  $\cdot 45$  per mille of population. Uran peta recorded the highest death-rate of  $3\cdot 39$ .

In addition to the usual precautionary measures against cholera, 15,491 persons were inoculated with anti-cholera vaccine.

Gujarat Registration District was very slightly affected. Cholera did not appear in an epidemic form but a few sporadic cases occurred here and there. During the year under report, 79 deaths were reported. Ahmedabad district recorded 68 deaths and Surat 11, while Broach, Kaira and Panch Mahals districts were quite free from the disease.

Cholera was first reported from Ahmedabad City on 16th May 1927. There were 7 cases and 4 deaths during May. The last case was reported on 31st May 1927. These 7 cases of cholera occurred in different wards of the city. Usual precautionary measures were carried out by the municipality on the advice of the Assistant Director of Public Health after which no further cases were reported from Ahmedabad City, until September, when 7 more occurred with two deaths. Wadaj village of Daskroi taluka was infected on 25th May 1927. The Medical Officer was put on cholera duty and treated 25 patients. The first case in Lapkaman village of Daskroi taluka was reported to have occurred on the 26th May. In all 6 cases and 4 deaths occurred from 26th May to 9th June 1927. No fresh cases were detected. Another village—Ognaj—of Daskroi taluka, reported 7 cases and 3 deaths from 31st May to 15th June 1927. No new cases occurred after that date. Rajoda village of Dholka taluka was infected on 30th May 1927. In all there were 35 cases and 8 deaths from 30th May to 7th June. Cholera was also reported from Bakrana village of Sanand Mahal in Ahmedabad district. In all 37 cases and 14 deaths had occurred from 4th to 24th June 1927. Sixteen cases and 6 deaths were reported from Rajpur village of Daskroi taluka.

In Surat district, Pardi taluka reported 11 deaths from cholera—3 in Umarsadi village and 8 in Salvav village. The infection in Umarsadi village was imported from Div Port. Usual precautionary measures were carried out. No special measures such as anti-cholera inoculations, etc., were adopted during the prevalence of the epidemic though in all cases these were recommended, but 10 persons out of 25 going to Hardwar from Dakore were inoculated by the Medical Officer of Health, Dakore municipality. In some cases, patients were treated with Tomb's Mixture.

Sind also was very lightly affected, 133 deaths (89 males and 44 females) were registered. The worst affected district was Sukkur with 195 cases



and 112 deaths. Larkana reported 26 cases and 11 deaths, Nawabshah 14 cases and 9 deaths and a fatal imported case from Sukkur town was reported to have occurred in Karachi city. Hyderabad, Thar and Parkar and Upper Sind Frontier districts were free from cholera during the year. The first case occurred in Sukkur district on 7th May 1927 and infection then spread to other districts presumably by human agency. As the Assistant Director of Public Health remarks, had the river or canal water been the source of infection the interval between the reporting of cases in different districts would have been much shorter. Cholera first broke out in Sukkur town reporting a fatal case on 7th May 1927. Most of the cases in Sukkur town occurred on 28th and 29th May in families who had been taking water from a small private well in Juma lane. Infection was reported to have been brought from Sukkur Barrage area by a hawker (where it broke out on 25th May) to the Juma lane. In Sukkur district, 4 talukas, viz., Sukkur, Rohri, Ubauro and Mirpur Mathelo reported 10, 46, 1 and 24 deaths, respectively, while Sukkur town reported 11 deaths, Rohri 14, Shikarpur 1 and Sukkur Barrage Township 5.

Medical Officers in Sind reported favourably on Tomb's Mixture which was used extensively.

44. *Preventive Measures.*—Warnings were given to taluka officers of the danger of an outbreak of cholera as well as instruction in the precautionary and preventive measures to be taken in case of need. As soon as cholera broke out in the Presidency, voluntary cholera committees were formed. Cholera leaflets containing instructions to village officers, house-holders and others were widely distributed and village officers and school masters were asked to read them out daily to the people.

All wells in the affected areas were treated with permanganate of potash, permanganate pills, powders and disinfectants being widely distributed among the villagers through the agency of the mamlatdars and the district and taluka local boards. In the absence of other disinfectants, lime was used with success in many places, especially in Bijapur, where the people took readily to this simple measure.

Inoculation was carried out by all Taluka Dispensary Officers and by 14 special medical officers appointed for the purpose, details of which have been given below.

Other measures adopted by these officers included the distribution of cholera Bilivaccine, and the use of Tomb's Mixture.

All Inspectors of Sanitation and Vaccination and vaccinators in affected areas were put on cholera epidemic duty and the services of most revenue officers such as Circle Inspectors, Patels, Kulkarnis and even clerks were freely utilized, wide spread educative propaganda being carried on through this agency.

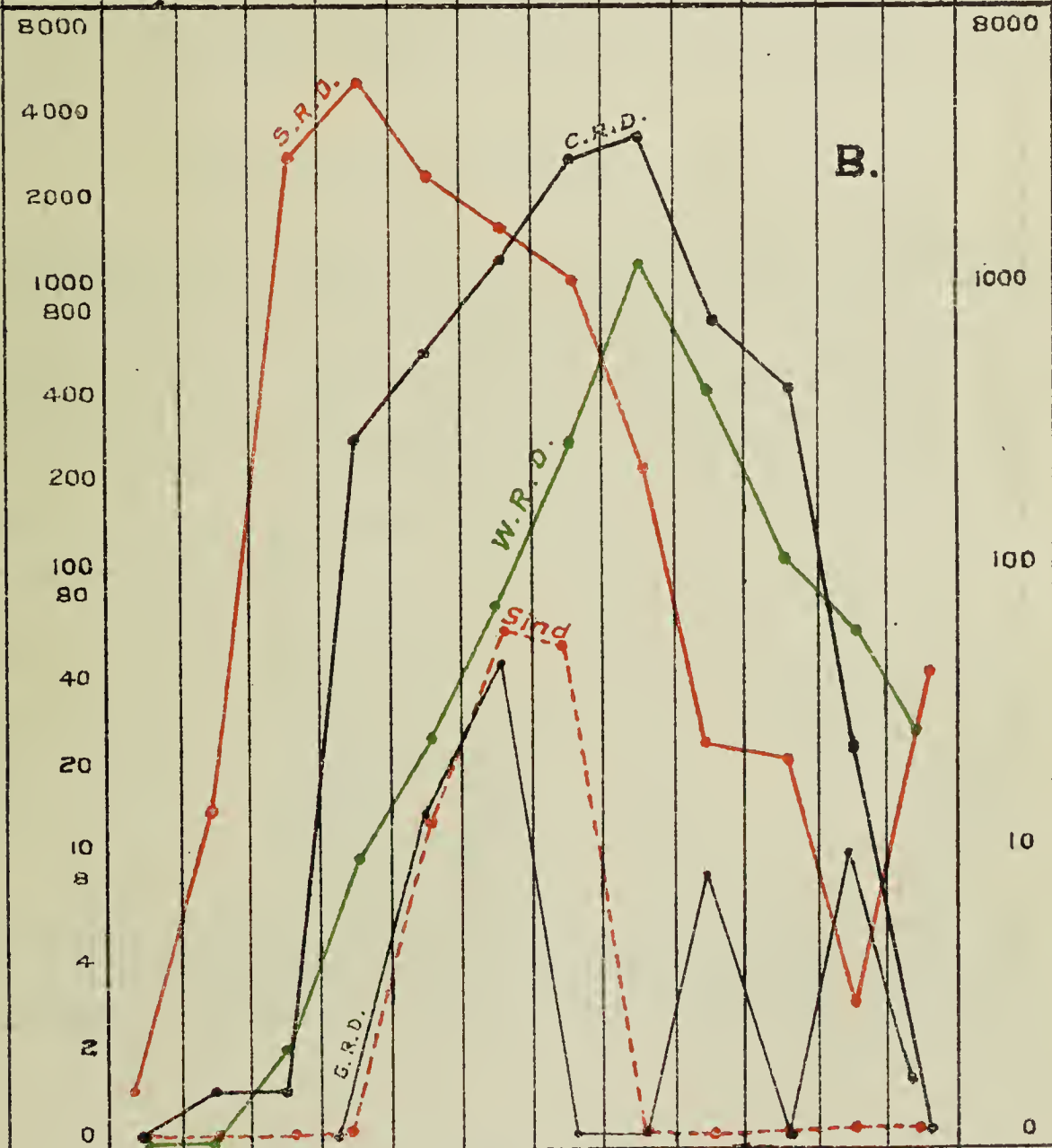
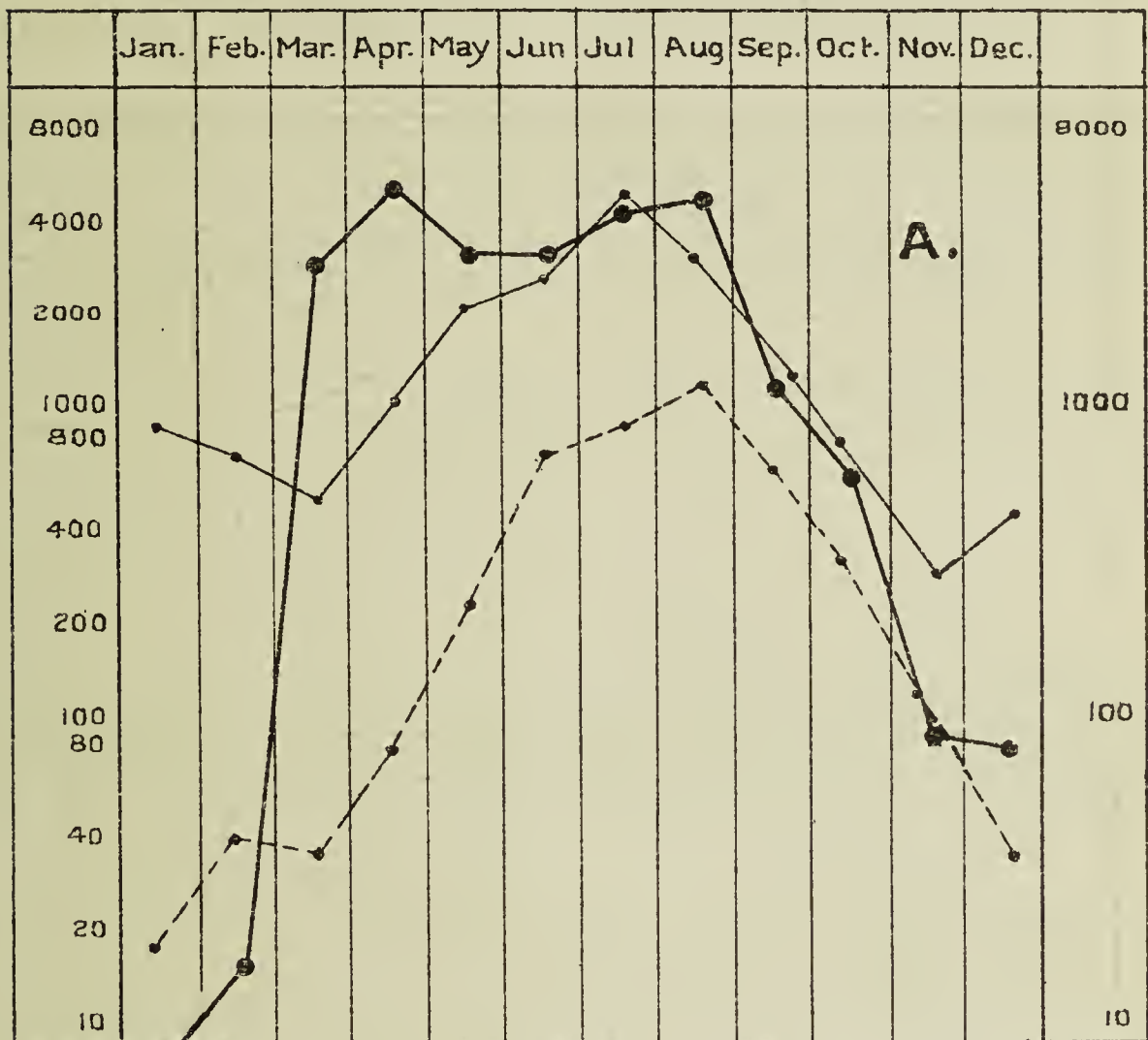
In several talukas and towns in the Southern Registration District, Boy-scouts and school masters were utilised for tracing cholera cases and carrying out the purification of water-supplies and other preventive work. Their services proved most useful.

Practically all fairs in the cholera affected areas were stopped.

# Chart IV (A. & B.)

## (A.) MONTHLY INCIDENCE OF DEATHS FROM CHOLERA (in the Bombay Presidency)

1927 ●—●, Mean 1921-1925 ----●, Mean 1911-20 —●—



## (B.) MONTHLY INCIDENCE OF DEATHS FROM CHOLERA BY REGN. DISTRICTS.





The Assistant Directors of Public Health met the members of Municipalities and District Local Boards, Mamlatdars and other leading people in affected areas, and discussed the situation with them, pointing out the best measures to adopt, and giving all the assistance in their power.

*Inoculation.*—During the year under report, 14 medical officers (6 B.M.S. and 8 S.M.S.) were appointed on cholera inoculation duty. Out of these, one was detailed for Belgaum, 2 for Dharwar, 1 for Bijapur, 4 for Satara, 2 for Sholapur and one each for Poona, Ahmednagar, East Khandesh and Kaira Districts.

The total number of persons inoculated against cholera during the year was 95,139. These were performed by the special inoculators appointed for the purpose, medical officers in charge of hospitals and dispensaries and private practitioners and others. Out of the total number of 95,139 inoculations, 52,321 were done in the Southern, 27,327 in the Central and 15,491 in the Western Registration Districts.

*Expenditure on Cholera Outbreaks.*—During the year under report, a grant of Rs. 15,000 was sanctioned by Government for measures against outbreaks of cholera, *e.g.*, supply of potash permanganate for disinfection of village water-supplies, cholera treatments and ingredients for Tomb's Mixture. Out of this sum approximately Rs. 8,100 were spent.

In addition to the above, out of the total grant of Rs. 31,000 sanctioned for inoculation against Plague, Cholera and other epidemics, a sum of Rs. 22,000 was expended in connection with cholera inoculation, *i.e.*, pay and travelling allowances of Medical Officers appointed for cholera inoculation duty (Rs. 12,000) and the purchase of anti-cholera vaccine (Rs. 10,000).

### *Dysentery and Diarrhœa*

45. This heading shows a considerable decrease on the previous years' figures—25,447 deaths (13,440 males and 12,007 females) against 34,158 in 1926 and 25,417 the mean of the previous five years. The death-rate was 1·33 against 1·78 in 1926 and 1·33 the quinquennial mean. It is probable that the total includes a proportion of the cholera deaths—sporadic cases and those at the beginning and end of mild local epidemics.

The number of deaths registered under Dysentery and Diarrhœa in previous years is as follows :—

Year	Deaths	Year	Deaths
1901-1910 mean ..	52,919	1923 .. ..	22,238
1911-1915 mean ..	39,455	1924 .. ..	28,926
1916-1920 mean ..	34,156	1925 .. ..	20,643
1921 ..	26,799	1926 .. ..	34,158
1922 ..	21,118	1927 .. ..	25,447

Central Registration District recorded the highest number of deaths—9,566, Southern 5,723, Western 5,554, Gujarat 2,434 and Sind 718 as



compared with 11,003 ; 7,635 ; 7,819 ; 4,568 and 844 respectively in 1926. Bombay City recorded 1,452 deaths equal to a death-rate of 1·26 as against 2,289 and 1·99 respectively in 1926.

The urban death-rate for the Presidency was 1·33 and the rural 1·33 against 2·01 and 1·73 respectively in 1926. The highest death-rates for urban areas were recorded in Kumta (5·32), Mahad (5·28), Nasirabad (4·35), Malegaon (4·05), Gokak (3·50), Bhatkal (3·36), Ashta (3·33), Borsad (3·22), Pandharpur (3·06) and Honawar (2·84). The highest death-rates for rural areas were recorded in the districts of Ahmednagar (3·21), Belgaum (2·85), Sholapur (2·56), Kanara (2·55), Satara (2·39) and East Khandesh (2·00).

46. *Dysentery*.—Under the first sub-heading 3,939 deaths were registered against 6,663, the death-rate being 0·21 against 0·35 in 1926. The urban death-rate was 0·30 and the rural 0·18 as compared with 0·56 and 0·30 respectively in the previous year. Four towns returned death-rates above two per 1,000 of population, *viz.*, Mahad (5·28), Kumta (3·85), Malwan (2·79) and Borsad (2·39).

Interesting experiments were carried out during the year by Major J. A. Manifold, D.S.O., R.A.M.C., into the causes of Poonaitis and his results have been published in the Indian Journal of Medical Research for January 1928.

Major Manifold states that a heavy infection of Bacillary Dysentery (*B. flexner*) exists among the Indian population in the Poona Cantonment which is passed to the European population and each other by contact throughout the year and to a much greater extent by flies during the monsoon period. This dysentery is the Poonaitis which is so prevalent during the rains. He considers that the water-supply of Poona is not responsible for the dysentery or diarrhoea endemic in the Cantonment but blames the existing sanitary arrangements. The completion of the extensive additions now being made to the drainage system of Poona should do much to improve this state of affairs.

47. Under Diarrhoea 21,508 deaths were recorded against 27,495 in 1926. The death-rate was 1·12 against 1·43 in the previous year. The urban death-rate was 1·03 and the rural 1·14 as compared with 1·46 and 1·43 respectively in 1926. Ten towns returned death-rates above two per 1,000 of population, *viz.*, Malegaon (4·05), Nasirabad (3·69), Gokak (3·40), Ashta (3·33), Pandharpur (2·94), Kirkee Cantonment (2·63), Poona City (2·34), Satara (2·27), Baramati (2·02) and Dakore (2·00). The highest death-rates for rural areas were recorded in the districts of Ahmednagar (3·05), Belgaum (2·67), Satara (2·67), Sholapur (2·55) and Poona (1·89). The drinking water-supply for the greater portion of Gokak town is from the river and pollution of this water is the chief cause of high mortality in the town.

Special investigations into the prevalence of intestinal diseases in Dharwar town were carried out by the Assistant Director of Public Health, Southern Registration District, last year, and several suggestions as to the prevention of such diseases were made. The municipality accordingly



acting upto the suggestions made some improvements to the feeding channels to tanks especially to the Moti Talav. The construction of some drains, etc., was also effected. It may be noted that the death-rate from Dysentery and Diarrhœa has fallen from 2·80 in 1926 to ·99 this year.

The Assistant Director of Public Health, Southern Registration District, reports :—

The bulk of deaths due to Dysentery occurred in the Below-ghat talukas of Kanara district. Epidemic dysenteries of bacillary type in the coastal talukas of Kanara during the monsoon does not seem to be an unusual yearly occurrence in that portion of the country. Heavy monsoons, contaminated water-supplies, diet and habits of the people, nature of the soil and climatic conditions, etc., seem to be the factors favouring its incidence. During 1926 the presence of the epidemic though not reported, was strongly suspected by the Assistant Director of Public Health from his observations of the general mortality returns received from the district. His suspicions were amply confirmed after enquiries into the matter. Thereupon action was taken which considerably helped in checking the disease to some extent. In view of last year's experience, a similar epidemic was anticipated this year and the Civil Surgeon at Karwar was addressed in the matter and requested to issue necessary orders to all taluka and municipal dispensary officers in the district instructing them to be on the look out for cases of dysentery in their jurisdiction. They were also asked to advise people regarding preventive measures. The Civil Surgeon complied with the request. Similarly the Collector was also asked to issue instructions in the matter to all the Mamlatdars and to direct them to be on the watch and co-operate in preventive measures. The President of the District Local Board and all Mamlatdars were also asked to provide themselves with large quantities of Potassium Permanganate and to arrange for the disinfection of water supplies, etc. The Inspectors of Sanitation and Vaccination of the district were ordered to tour in the district, give advice and help in carrying out the preventive measures.

The advice given by the Assistant Director of Public Health regarding preventive measures was to a great extent followed. The result of all this seems to be a marked drop, by over 50 per cent. in deaths due to dysentery as compared with the last year.

The most striking results in this connection were achieved in Honawar where the number of deaths by dysentery during the year dropped to 8 from 73 recorded in 1926. The Assistant Director of Public Health paid a special visit to this area and in particular to Honawar, Kumta, Karwar, etc., in connection with these epidemics and personally advised the local bodies and officials in the matter.

In Appendix II, a table is given showing the effect on the death-rate by the introduction of a piped water-supply ; it will be noticed that the mean death-rate from cholera and dysentery and diarrhœa for the years succeeding installation ending with the year under report, shows great improvement over that for the quinquennial mean preceding the introduction of a piped supply in practically all the towns.

48. *Hook-worm*.—References to this disease are rare in these reports, but as a special enquiry into the incidence of the disease throughout India was carried out by Dr. Asa C. Chandler, M.Sc., Ph.D., during the year, a note may be made here.

Hitherto it has been believed that Hook-worm was practically non-existent in the Presidency. Medical Officers in charge of hospitals and dispensaries rarely come across it, and cases are never found in the



Jails, although climatic conditions in certain parts of the Presidency are not unfavourable.

Dr. Chandler visited the following places at each of which samples of stools were taken for examination and sent to Calcutta :—Kelgeri (Dharwar district), Loni (Poona district) and Sholapur.

His report was published in the Indian Journal of Medical Research for January 1928 and is as follows :—

“ The entire Deccan is practically free from Hook-worm especially in the western part where even extremely light infections are rare.....Kathiawar and Gujarat are also practically free although near Baroda in the path of the northern extremity of the south-east monsoon.....there is a high incidence of *light* infection.

The only part of the Bombay Presidency which has any appreciable amount of infection is the so called Konkan.....”

Unfortunately Dr. Chandler was unable to actually visit the Konkan but bases his opinion that a moderate degree of Hook-worm exists there by a comparison of the climatic conditions and habits of the people with those on the Malabar Coast of Madras, where infection is known to exist. It is hoped to confirm this opinion by investigation on the spot in the near future. Meanwhile, it is satisfactory to know that the Presidency as a whole is free from this dangerous pest.

### Plague

49. Plague was less prevalent in the Presidency this year showing a decrease by more than 58 per cent. in deaths over the figures for last year. The mortality was in fact the lowest since the introduction of the disease to the Presidency, 4,076 deaths being registered, equal to a death-rate of .21 as contrasted with 9,866 deaths with a death-rate of .51 in the preceding year.

The total number of deaths recorded in each year since 1903 is given below :—

Year	Number of deaths	Year	Number of deaths
1903	281,269	1916	79,507
1904	223,957	1917	162,874
1905	71,363	1918	79,478
1906	51,525	1919	9,626
1907	93,609	1920	13,857
1908	27,345	1921	4,672
1909	24,316	1922	8,379
1910	25,043	1923	33,741
1911	100,399	1924	9,214
1912	28,984	1925	12,601
1913	25,288	1926	9,866
1914	20,060	1927	4,076
1915	43,824		

The distribution of plague given in detail in Annual Form No. XII shows that the chief areas of mortality were Dharwar and Satara districts, with milder epidemics in Belgaum, Bijapur and Kanara Districts.

Other districts in the Deccan were slightly infected while Gujarat (with the exception of Surat) and Sind escaped entirely.

In Dharwar and Belgaum districts the epidemic is reported to have continued throughout the year without a break, the highest mortality occurring in October. In Bijapur district there was a break during May. East Khandesh, West Khandesh and Nasik districts were entirely immune.

The chief preventive measure relied upon was inoculation. Special inoculators were detailed for plague duty at the outbreak of an epidemic to supplement the efforts of Medical Officers of dispensaries and private practitioners.

Routine ratting operations were carried on throughout the year by the municipalities of Belgaum, Nipani, Belgaum Cantonment Committee, Pandharpur, Sholapur, Barsi, Lonavala, Mahableshwar, Malegaon, Dhulia and Karachi and for shorter periods in many other towns.

Systematic evacuation is rarely practised in these days except in a few small towns and some villages.

Details of various outbreaks are as follows :—

In Dharwar district, 1,594 deaths were recorded against 3,969 in the preceding year. The death-rate was 1·54 against 3·83 in 1926. Among the talukas, Kod and Bankapur suffered heavily recording 364 and 132 deaths respectively. Nargund, Mundergi and Hubli talukas escaped lightly. Among the town circles, Gadag-Bettigeri and Ranebennur were the worst affected with 190 and 179 deaths, respectively. Hubli town escaped entirely excepting 1 death. In the previous year it was the worst affected (147 deaths). Out of 18 registration circles and 1,277 villages, 17 circles and 110 villages reported deaths. Navalgund town was quite free. It enjoyed complete immunity during the previous year also.

During the year, 2 Subordinate Medical Service Officers were employed for inoculation work. They performed 2,194 inoculations in 31 villages. They visited all the infected areas of the district and explained the advantages of inoculation to the villagers who were assembled there.

In Bijapur district, 405 deaths were recorded against 805 in the previous year. The death-rate was ·51 against 1·01 in 1926. Indi and Bijapur talukas reported 246 and 75 deaths, respectively. Bagalkot and Ilkal towns were quite free. Bijapur town recorded 25 deaths.

In Belgaum district, 569 deaths were recorded against 715 in the preceding year. The death-rate was ·60 against ·75 in 1926. Belgaum, Sampgaon and Chandgad talukas reported 140, 121 and 84 deaths, respectively, while Chikodi, Hukeri, Gokak and Murgod were entirely free. Among the towns, Belgaum recorded 196 deaths and Athni 2 deaths. Gokak and Nipani towns were quite immune. Out of 15 registration circles and 1,069 villages, 9 circles and 50 villages reported deaths.



One Subordinate Medical Service Officer was employed for plague inoculation work. He performed 915 inoculations in 17 villages. He visited all the infected areas of the district.

In Kanara district, 299 deaths were recorded against 143 in the previous year. The death-rate was  $\cdot 74$  against  $\cdot 36$  in the preceding year. Out of the total deaths of 299 Haliyal taluka contributed 217 deaths and Sirsi 62. Other talukas Mundgod and Siddapur recorded 11 and 7 deaths. All the towns were entirely free except Kumtha which recorded 2 deaths.

In Central Registration District, 782 deaths were recorded against 2,593 in 1926. Out of these Satara district was the chief area of mortality and returned 684 deaths against 2,450 in the preceding year. The death-rate was  $\cdot 67$  against  $2 \cdot 39$  in 1926. Out of 19 registration circles and 1,342 villages, 7 circles and 412 villages reported deaths. The highest incidence was recorded in October. The district was quite free from May to July. Karad and Koregaon were the worst affected talukas, recording 374 and 209 deaths, respectively. Karad town escaped lightly—5 deaths. Shirala and Patan talukas reported 20 and 74 deaths. Satara, Jawli, Malcolmpeth, Wai Tasgaon, Khanapur, Khatav and Man talukas were quite immune. The towns of Satara, Wai, Ashta and Islampur, which were affected last year, escaped entirely.

One Bombay Medical Service Officer was engaged for plague inoculation. He performed 1,174 inoculations in 22 villages. He visited all the infected areas of the district.

In Sholapur district, 57 deaths were recorded against 23 in 1926. The death-rate was  $\cdot 08$  against  $\cdot 03$  in the preceding year. Two villages each in Sholapur and Barsi talukas were affected and returned 51 deaths. Sholapur town recorded 5 deaths and Pandharpur town 1 death. Barsi town was entirely free.

In Ahmednagar district, 35 deaths were recorded against 55 in the preceding year. The death-rate was  $\cdot 05$  against  $\cdot 08$  in 1926. Five villages in Sheogaon taluka and Pathardi peta were affected and returned 35 deaths. The towns of Nagar and Sangamner were entirely free.

In Ratnagiri district, 6 deaths were recorded against 64 in the preceding year. Vengurla town returned 5 deaths and Vengurla taluka 1 death.

Poona district enjoyed complete immunity against 1 death in the preceding year.

In Western Registration District, 171 deaths were recorded against 1,556 in the preceding year. Kolaba district contributed 121 deaths against 112 in 1926. The disease was present throughout the year except May, June, September and October. Out of 13 registration circles and 1,482 villages, 7 circles and 14 villages reported deaths. The mortality was on the rise during the month of March (52 deaths). Panvel taluka was worst—returned 71 deaths. Other talukas escaped lightly. The towns of Panvel and Uran returned 8 and 17 deaths, respectively. Alibag town was practically free.



In Bombay Suburban District, 31 deaths were recorded against 32 in 1926. The death-rate was  $\cdot 20$  against  $\cdot 21$ . The district returned isolated cases from February to September. South Salsette taluka recorded 4 deaths. The towns of Kurla and Bandra reported 17 and 10 deaths, respectively.

In Thana district, 18 deaths were recorded against 95 in 1926. The death-rate was  $\cdot 02$  against  $\cdot 13$  in the preceding year. The district was affected from January to May and also during September. Bhiwandi, Kalyan and North Salsette talukas recorded 13, 4 and 1 deaths, respectively. All the towns in the district were entirely free.

During the previous year East Khandesh district was badly affected—1,304 deaths, but during the year under report it escaped entirely having recorded one death only. West Khandesh and Nasik districts were completely immune.

In Surat district, 48 deaths were recorded against 2 in the preceding year. Bulsar town was responsible for 29 deaths while Bulsar taluka recorded 19 deaths. The Assistant Director of Public Health reports—“The disease broke out among the Machis who are sailors and take ferry boats to Bombay, Karachi, Porbander, Bhavnagar, Mahuva, etc., during the fair season and before the onset of monsoon they return to their places. One of the persons who had returned from Mahuva after his sea journey for 6 months to Bombay, Porbander, Bhavnagar and other places was attacked with plague. It is, therefore, probable that he must have imported infection through fleas or rats in his house from any of the places he might have visited during his return journey to his Native place.”

At the request of the President, Bulsar municipality, one Subordinate Medical Service Officer was secured for anti-plague inoculation work. He was supplied with inoculation outfit by this office. Another Subordinate Medical Service Officer was deputed by the Civil Surgeon, Surat, for inoculation duty.

In Bombay City, 207 deaths were recorded against 56 in 1926. The death-rate was  $\cdot 18$  against  $\cdot 05$  in the preceding year.

*Ratting Operations.*—A determined rat campaign was carried out. 592,918 rats were caught and destroyed. Out of these 261,766 were examined and 1,421 found to be plague infected. The daily average number of traps issued was 600.

Sind Registration District was entirely free excepting 1 death reported to have occurred in Sukkur district.

50. The total number of persons inoculated during the year under report was 56,171 as compared with 84,900 in the previous year. Out of these 54,585 were performed in British Territory and 1,586 in Native States.



The total number of persons inoculated in each year since 1914 is given below :—

Year	Number	Year	Number.
1914 .. ..	62,497	1921 .. ..	39,208
1915 .. ..	128,800	1922 .. ..	73,098
1916 .. ..	211,907	1923 .. ..	145,395
1917 .. ..	241,139	1924 .. ..	60,327
1918 .. ..	36,571	1925 .. ..	60,831
1919 .. ..	28,307	1926 .. ..	84,900
1920 .. ..	49,117	1927 .. ..	56,171

During the year under report 95 cases of plague amongst persons inoculated were reported of which 34 died. Out of these 95 cases, 22 were attacked within 10 days of inoculation.

By districts, the number of operations was 25,445 in Dharwar; 15,544 in Belgaum; 7,244 in Kanara; 918 in Bijapur; 2,018 in Satara and 1,682 in Surat. In Bombay City, 1,305 inoculations were performed. In Belgaum and Bijapur Prisons, 1,037 and 734 inoculations were performed respectively.

#### *Small-pox*

51. There was a slight rise in mortality from Small-pox as compared with the previous year, the total deaths recorded during the year being 5,091 (2,573 males and 2,518 females) against 3,922 in the previous year and 4,940 the mean of previous five years. The death-rate was  $\cdot 27$  against  $\cdot 20$  in 1926 and  $\cdot 26$  the quinquennial mean. The incidence of the disease was thus on the normal line.

The annual mortality for previous years is given below :—

Year	No. of deaths	Year	No. of deaths
1901-1910 mean ..	4,962	1924 .. ..	11,152
1911-1920 mean ..	5,074	1925 .. ..	5,644
1921 .. ..	1,771	1926 .. ..	3,922
1922 .. ..	1,170	1927 .. ..	5,091
1923 .. ..	2,811		

*Distribution.*—Detailed figures are given in Annual Form No. VIII.

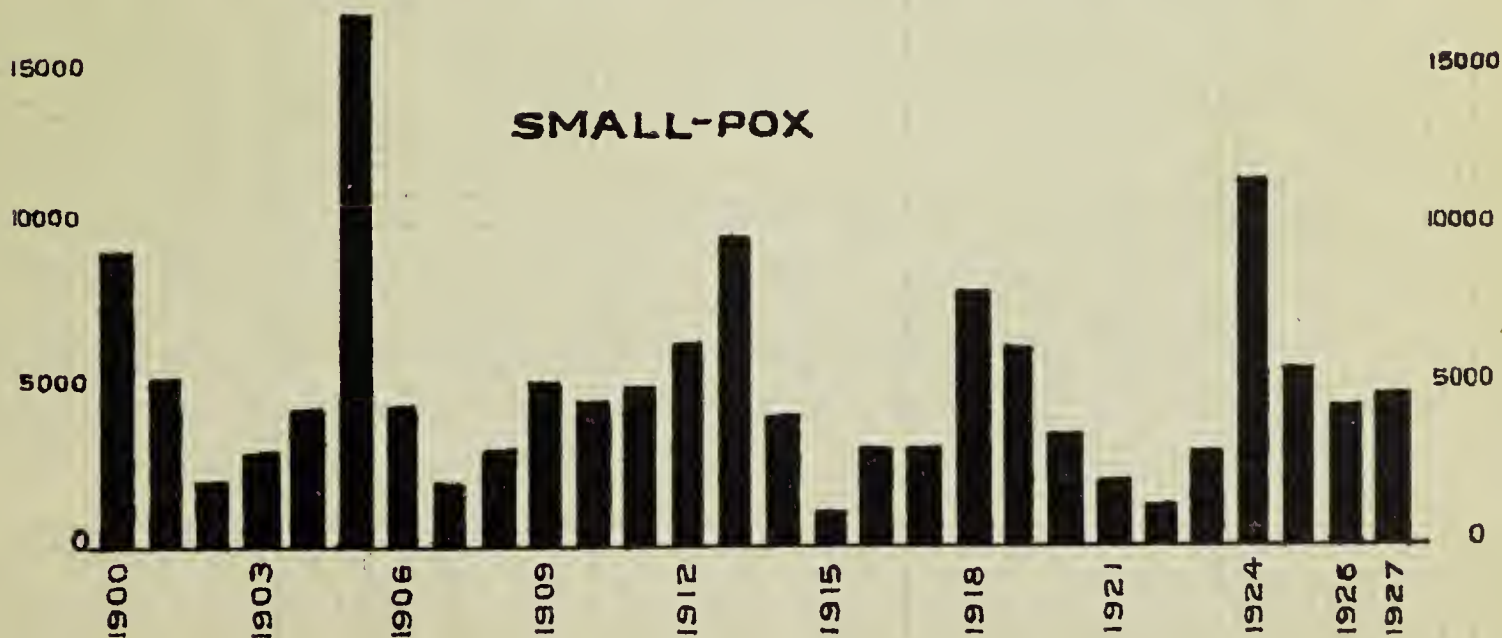
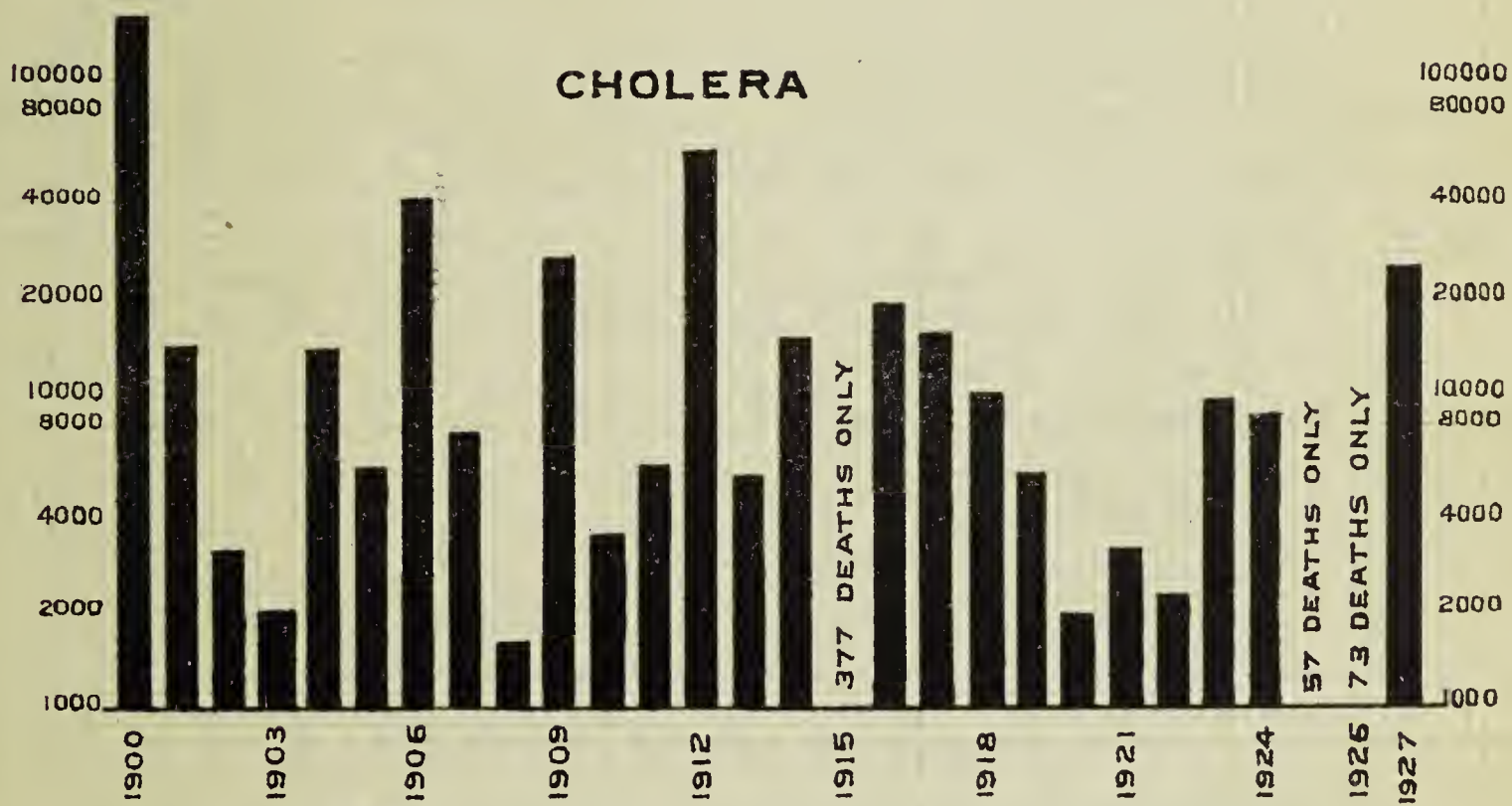
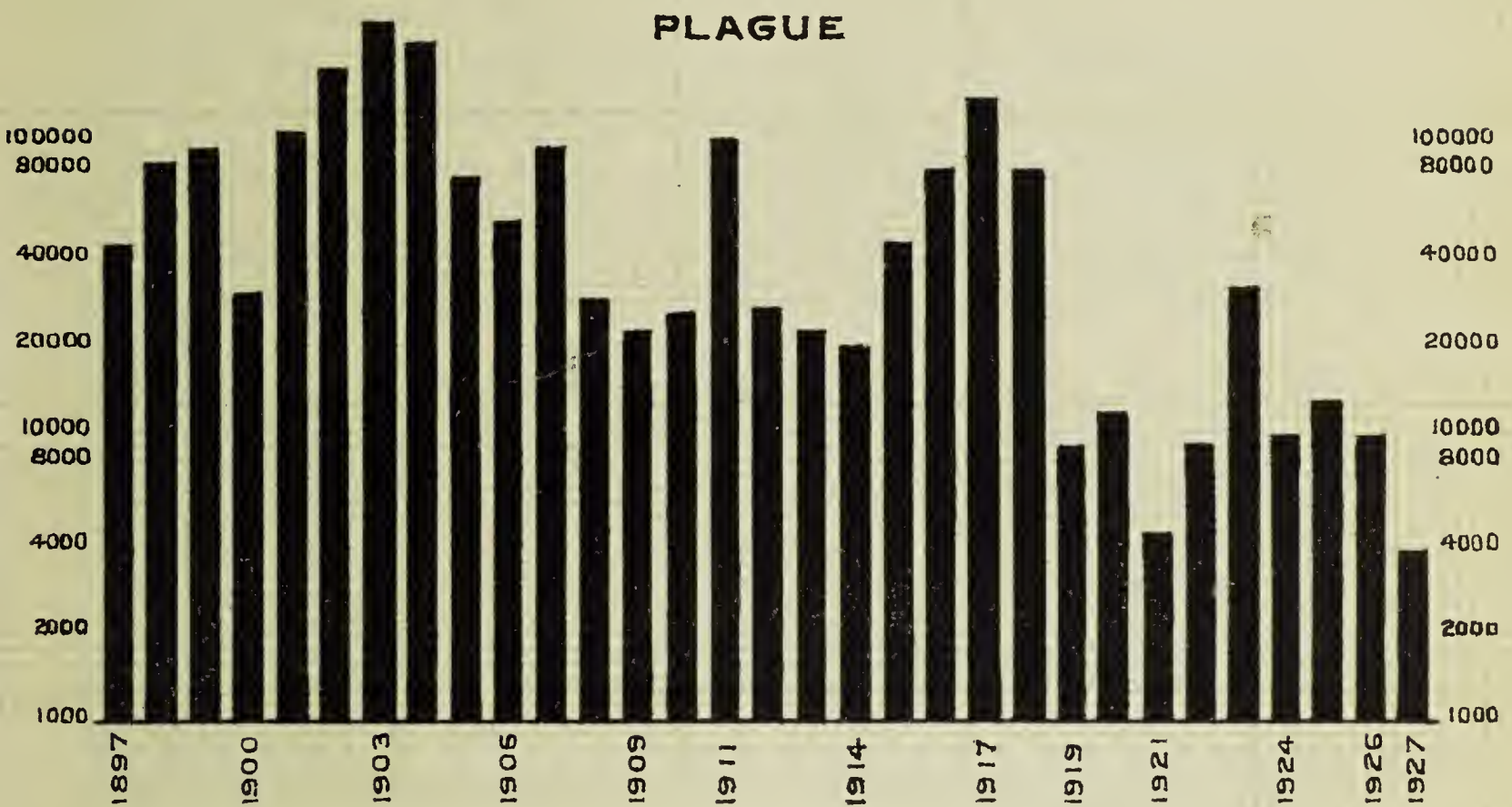
While all the collectorates were infected, the following suffered heavily; Surat reported 796 deaths or a ratio of (1·18), East Khandesh 662 ( $\cdot 61$ ), Poona 574 ( $\cdot 58$ ), Nasik 460 ( $\cdot 56$ ), Belgaum 262 ( $\cdot 28$ ), Satara 275 ( $\cdot 27$ ), Ratnagiri 305 ( $\cdot 26$ ), Ahmednagar 159 ( $\cdot 22$ ), Nawabshah 99 ( $\cdot 23$ ), Bombay Suburban 51 ( $\cdot 34$ ). In Bombay City 841 deaths were registered equal to a ratio of  $\cdot 73$  against 476 and  $\cdot 41$  respectively in 1926.

Two hundred and thirty-five registration circles with 1,101 villages were infected.

# Chart. V

## ANNUAL INCIDENCE OF DEATHS FROM EPIDEMIC DISEASES

Scale figures represent actual deaths. For Plague & Cholera, figures are at their log: intervals and only those above 1000 are shown.







The highest urban death-rates were recorded in Rander (4·46), Surat (4·29), Poona City (3·28), Gokak (3·20), Manmad (2·53), Islampur (2·53), Nasirabad (1·81), Parola (1·74), Mirpurkhas (1·72), Nasik (1·31) and Jalgaon (1·01).

Of the 5,091 deaths from small pox, 1,451 were of infants under one year and 2,368 of children between one and ten years of age.

With the exception of a few municipal towns and Cantonments, vaccination is on a voluntary basis and though every effort is made to trace out unprotected children that fact, coupled with imperfect registration of births, is responsible for many children failing to receive protection in time.

Eighty-three per cent. of the mortality occurred during the first six months of the year, April recording the maximum mortality.

52. The following is a short summary for each Registration District :—

The heaviest incidence occurred in Central Registration District with 1,364 deaths; Western 1,336; Gujarat 890; while Southern reported 324 and Sind 336 deaths as compared in that order with 427; 495; 971; 410; and 1,143 in 1926.

In the Central Registration District, small-pox was severe in Poona Collectorate, while the incidence was the lowest in the Sholapur district with only 51 deaths. Out of 79 registration circles, 68 were affected against 47 in 1926. Deaths were reported from 357 towns and villages against 142 in last year. Of the 1,364 deaths, 360 were of infants under one year and 633 of children between one and ten years of age. The highest mortality was recorded in the month of March. In Ahmednagar district 74 villages were infected. There were 756 attacks and 159 deaths. Twenty-two attacks and 16 deaths were reported from Ahmednagar town. The Medical Officer of Health states :—“ Another point that I have observed and wish to comment on is the absence of compulsory vaccination in this city. In times of threatened epidemics of small-pox the absence of compulsory vaccination greatly hampers the Health Officer's work in checking the spread of the disease. This has been brought to the notice of the municipality and it is hoped that this point will be seriously attended to.” In Poona district, 67 villages were affected. There were 1,785 attacks and 574 deaths. In Poona City, small-pox cases were reported throughout the year. The epidemic was at its height in March when 118 deaths were recorded.

A meeting of the representatives of Poona City, Poona Suburban Municipalities, Kirkee Cantonment and G. I. P. Railway was held in the office of the Director of Public Health to discuss measures for a vigorous vaccination campaign.

Twenty-one villages in the district were infected from Poona City. In Sholapur district, 7 registration circles were affected and returned 282 attacks and 51 deaths. Ninety-seven cases and 25 deaths were reported from Sholapur City. The Medical Officer of Health, Sholapur Municipality, also draws attention to the difficulty of coping with an epidemic without



powers to enforce legislation. Sholapur is an industrial place and draws its labour chiefly from the neighbouring Hyderabad Territory. Consequently a large influx of people of the industrial class constantly takes place into the City from the neighbouring Hyderabad Territory. As most of these people are unprotected, there is always present in the city a large proportion of susceptible persons. It is, therefore, not to be wondered at that Small-pox is persistently present in the city. He remarks that although people as a whole do not object to vaccination, yet their indolence and apathy come in the way of getting their children vaccinated, unless they are compelled. This is very true and applies to other countries besides India and to preventive measures against disease in general. In Satara district, there were 1,413 attacks and 275 deaths were reported from 97 towns and villages. Fourteen villages received infection from Bombay. In Ratnagiri district 105 towns and villages were infected. There were 2,125 cases and 305 deaths. Malwan town returned 42 attacks and 8 deaths. Most of the villages in other talukas of the district received infection from Bombay.

In the Western Registration District, 1,336 deaths were reported against 495 in 1926. Sixty-eight registration circles were affected while 412 villages reported deaths. East Khandesh and Nasik districts were badly affected. Of 1,336 deaths, 447 were under one year and 728 between one and ten years of age. April recorded the highest number of deaths. Vaccination campaigns were carried out in several affected places.

In the Gujarat Registration District, 2,581 attacks and 890 deaths were recorded against 2,077 and 971 in 1926. In Surat district all the rural and town circles were affected, the death-rates for the district 1·18 and Surat City 4·29 being the heaviest in the Presidency. The outbreak in Surat City was of a grave character, and commencing in the previous year continued up to June 1927—504 deaths occurred. The following steps were taken by the Surat City Municipality :—

Vaccinators were sent into all seriously affected localities and a special vaccination campaign was carried out in the city. The public were notified of this and the municipal sanitary staff took steps to find out unprotected children by house to house inspections. Hand bills showing the advantages of vaccination were distributed in the city. Efforts were also made to vaccinate children at all primary schools and special facilities were given to medical men to vaccinate children at their dispensaries. During the Baby Week Celebration special stress was laid on the advantages of vaccination. A proposal for making vaccination compulsory has been put forward by the Medical Officer of Health and is under the consideration of the municipality.

In Broach district all the rural circles were affected and returned 44 deaths. The town circles were free from the disease. Infection in Kaira district resulted in only four deaths being reported. Panch-Mahals and Ahmedabad districts were slightly affected reporting only 20 and 26 deaths, respectively.

In the Southern Registration District, 2,561 attacks and 324 deaths were recorded against 3,121 and 410 respectively in 1926. Belgaum



district recorded the highest number of deaths—262 ; 29 registration circles were affected while 123 villages reported deaths. The mortality was highest in April after which it declined reaching its minimum in October. In Belgaum district, all rural circles and Belgaum and Gokak towns were affected. Murgod and Belgaum talukas were the worst affected returning rates of  $\cdot 93$  and  $\cdot 48$  respectively. Gokak town recorded the highest death-rate of  $3\cdot 20$ . The record of incidence and mortality rate was highest in the Belgaum district. This may be attributed perhaps to the indirect effects of cholera on the bulk of the people in this district. Dharwar, Bijapur and Kanara districts were slightly affected, returning 29, 20, and 13 deaths, respectively.

In Sind, small-pox shows a considerable decrease on the previous year's figures—336 deaths against 1,143 in 1926 and also on the mean for the last five years (675). In all 1,749 cases with 336 deaths were reported. All the districts were affected, Nawabshah being the worst sufferer with 99 deaths. Of 336 deaths, 58 were among infants under one year, 125 between one and ten years and the remaining 153 above 10 years. Of 5,134 towns and villages in Sind, 94 were affected by small-pox. In Karachi city, the disease was prevalent from January to August in a mild form. In all 32 cases resulting in 10 deaths were reported during the year as against 241 cases with 80 deaths in the preceding year. On enquiry, the Health Officer, Karachi municipality, reported that the first case occurred on 10th January imported from Kathiawar. Subsequently only 4 sporadic cases occurred in the city. Another imported case was reported on the 26th February at Karachi and after this date 5 more cases occurred at Kiamari in the vicinity of the imported case. An epidemic of small-pox in Karachi usually starts with cases imported from outside. In Hyderabad town, small-pox broke out on 2nd February and continued till 23rd December 1927. In all 31 cases with 9 deaths were reported during the year against 99 cases with 51 deaths in 1926.

53. In accordance with Government Resolution, General Department, No. P.-61, dated the 29th January 1926, the following short summary of small-pox cases treated at the various Hospitals in the Presidency is given :—

In all 89 cases were treated at the Civil Hospitals and Epidemic Diseases Hospitals, as against 75 in the previous year. Of the cases treated, 64 had been vaccinated as against 14 in the previous year, while 1 was stated to have been successfully vaccinated but no vaccination cicatrix could be seen. Twenty-three were unvaccinated as against 56 in the previous year. One case was successfully re-vaccinated. Nineteen cases were treated at the Epidemic Diseases Hospital, Karachi. Of the cases treated, 8 had been vaccinated and the remaining 11 were un-vaccinated. Among the 8 vaccinated, 2 had 3 marks on each arm, 2 had 3 marks on one arm, 2 had 1 mark on each arm and the remaining two had one mark on one arm only. Total mortality amongst all the small-pox cases admitted in the Hospital was six. Out of these six deaths, only one was vaccinated having only one mark on one arm only, and the remaining 5 were unvaccinated.



*Injuries*

54. There were 7,873 deaths recorded from injuries of which 4,517 were among males and 3,356 among females. The number registered in 1926 was 7,672 while the quinquennial mean was 7,625.

The annual mortality for previous years is as follows :—

Year.	Number of deaths.	Year.	Number of deaths.
1901-1910 mean..	6,879	1924	7,374
1911-1920 mean..	7,725	1925	7,754
1921	7,888	1926	7,672
1922	7,810	1927	7,873
1923	7,514		

From the above table it will be seen that this definite cause of death which is free from most errors of registration, varies but little from year to year.

Further comparisons arranged under the various heads are set forth in the following table :—

	1927.			1926.		
	Male.	Female.	Total.	Male.	Female.	Total.
Drowning	1,184	1,583	2,767	1,160	1,563	2,723
Poisoning	118	42	160	135	43	178
Hanging	190	70	260	186	79	265
Wounding	1,224	568	1,792	1,090	507	1,597
Wild beasts	43	12	55	40	19	59
Snake-bite	957	544	1,501	888	533	1,421
Rabies	119	68	187	151	83	234
Railway Accidents	85	14	99	100	17	117
Other causes	597	455	1,052	588	490	1,078
Total	4,517	3,356	7,873	4,338	3,334	7,672

Increases in deaths by wounding and snake-bite are the noticeable features in contrast with the previous year.

*Snake-bite deaths.*—One thousand five hundred and one deaths were attributed to snake-bite against 1,421 in 1926. The highest number occurred in Ratnagiri district, *viz.*, 290. Next in order were Thana 158, Satara 121, Ahmedabad 81, Thar and Parkar 67, Panch Mahals 63 and East Khandesh 60. Ratnagiri, Thana and Satara also headed the list last year. In the Southern Registration District, 135 deaths from snake-bite occurred during the year under report. Eighty-one of these were males and 54 females. One hundred and eleven deaths were enquired into. In 33 cases the snake was identified as a cobra and in these the

interval between bite and death varied from 1 to 61 hours. In Gujarat Registration District, 267 deaths from snake-bite were reported against 235 in 1926. Of these, 105 deaths were caused by “black serpents,” 22 by “cobras” and 140 by others unidentified. The interval between bite and death varied from a few minutes to 24 hours in the case of “black serpents” and from a few minutes to 5 hours in the case of “cobras.”

*Rabies.*—One hundred and eighty-seven deaths were reported under this heading against 234 in the previous year. Ahmedabad district recorded the highest number—22, Dharwar 20, Kaira 20 and Satara 14. Ahmedabad city reported 5 deaths and Bagalkot town 5 deaths.

In the Southern Registration District, out of the total number of 1,338 deaths from injuries, there were 115 deaths under “Murder” against 120 in 1926. Belgaum district recorded 51, Bijapur 31, Dharwar 27 and Kanara 6.

*Suicide deaths show a decrease.*—Six hundred and twenty-six (391 males and 235 females) against 645 (394 males and 251 females) in 1926. Details for the districts returning the highest number are as follows :—

District.			Drawning.	Poisoning.	Hanging.	Wounding.	Railway.	Total.
Bombay City	..	..	4	62	6	8	2	82
Bijapur	..	..	6	2	43	3	..	54
Belgaum	..	..	12	1	33	2	..	48
Dharwar	..	..	9	..	37	1	..	47
Thana	..	..	13	2	28	..	..	43
Satara	..	..	18	7	12	..	..	37

### *Other Causes*

55. Under this heading deaths from a variety of Causes—debility, old age, rheumatism, chronic cases belonging properly to one or other of the tabulated headings and deaths from diseases common in occurrence but beyond the knowledge of the village registrar, *i.e.*, all deaths which cannot be classed under the tabulated headings are included under this one.

It covers ordinarily about one-fourth of the total deaths and in numerical importance in the mortality tables, therefore, comes second to “Fevers.” It is subject to less fluctuation than other headings. For these reasons it presents a reliable index, to the general health of the community.

149,745 deaths (75,883 males and 73,872 females) were registered as compared with 166,069 (84,079 males and 81,990 females) in 1926 and a quinquennial mean of 147,210. The death-rate was 7·81 against 8·67 in 1926 and a quinquennial mean of 7·68.



The annual mortality for previous years is as follows :—

Year.				Number of deaths.	Ratio per mille.
1901-1910 mean	..	..	..	.. 140,618	7·61
1911-1915 mean	..	..	..	.. 144,911	7·40
1916-1920 mean	..	..	..	.. 164,773	8·41
1921	..	..	..	.. 134,263	7·01
1922	..	..	..	.. 130,766	6·82
1923	..	..	..	.. 140,154	7·31
1924	..	..	..	.. 159,008	8·30
1925	..	..	..	.. 140,053	7·31
1926	..	..	..	.. 166,069	8·67
1927	..	..	..	.. 149,745	7·81

56. *Deaths during Child-birth.*—One of the sub-heads of “Other Causes” shows a decrease from 4,392 to 3,814. For the Western, Central, Southern, Gujarat and Sind Registration Districts the total deaths were 676 ; 821 ; 807 ; 518 ; and 886 as compared with 909 ; 845 ; 842 ; 561 ; and 1,092 respectively in 1926. In Bombay City 106 deaths were recorded during the year against 143 in 1926. The decrease was shared by all the Registration Districts, Western and Sind being the highest as compared with the preceding year.

Taking the Presidency as a whole one woman was reported to have died as the result of child bearing, to every 185 live births, as compared with one per 162 in 1926. The urban and rural figures were one per 115 and 207 respectively as compared with 85 and 193 in the preceding year.

Among Collectorates, the toll of life exacted by child-birth still continues to be the highest in Kanara where one mother died for every 49 births registered as compared with 47 in the previous year. The maternal mortality rates for other collectorates of the Southern Registration District were Dharwar 1 to 156, Belgaum 1 to 222 and Bijapur 1 to 435 as against 152, 228 and 272 respectively in 1926. The mortality rate from child-birth in the Bijapur district has been considerably improved. This may be due to efforts of the Collector and the branch of the Red Cross Society who are taking a great interest in child-welfare work. Elsewhere the following districts show high rates. Nasik 1 to 146, Ahmednagar 1 to 148 and Thana 1 to 176 births. The Sind rates are still higher, *e.g.*, Thar and Parkar 1 to 74 births, Hyderabad 1 to 75, Nawabshah 1 to 77, Sukkur 1 to 77, Larkana 1 to 78, Karachi 1 to 97 and Upper Sind Frontier 1 to 221 births. Sind towns, although there is some improvement in the maternal mortality, still show extreme rates as compared to the Presidency proper, for example, Shikarpur one maternal death in every 31 births, Larkana one in every 31, Sukkur one in every 74, Hyderabad one in every 92, and Karachi one in every 110 births.

In Bombay City one mother died for every 201 births. Amongst towns, Broach shows a figure of 60, Poona City 61, Ahmedabad 90, Surat 105 and Sholapur 136.

Some improvement in this respect is noticeable at Karachi and Sukkur where the figures for the last two years were 110 and 85 and 74 and 52, respectively. The Child Welfare and Maternity movement has

continued to progress in Sind owing to the efforts of the Mrs. Hamid Ali, Red Cross Maternity Home in Larkana, the Women's Health Education Society, and the Ishawarbai Sitaldas Tirathdas Maternity Home at Shikarpur and Miss Piggot's activities in other parts of Sind. During the year Miss Piggot visited 40 new towns and villages. 7,575 women attended her lectures. The popularity of the maternity homes has steadily increased in every part and excellent work is being turned out in spite of many difficulties. This year the Shikarpur Ishwarbai Maternity Home received a grant of Rs. 700 from Government and the Mrs. Hamid Ali Maternity Home a grant of Rs. 500. The Honorary Secretary, Larkana Red Cross Society, reports that the new building for the Maternity Home is under construction at a cost of about Rs. 20,000 and the usefulness of the home will then be still further increased. In Hyderabad town after the appointment of a Lady Health Visitor by the Municipality the maternity service has been rendered more efficient. Miss R. Piggot also reports that her organization is paying special attention to Hyderabad in this respect. The Health Officer, Hyderabad Municipality, says, in his report that during the year 1927, 2,821 house visits were paid by the Lady Health Visitor. Besides this, two trained midwives were appointed by the municipality, to attend labour cases. From 1st May to 31st December 1927, 192 cases were conducted by the municipal midwives. A Child Welfare Centre was also started by the municipality on 26th December 1926.

57. *Guinea-worm*.—The Indian Research Fund Association having agreed to defray the cost of conducting an investigation into the sterilization of wells with lime as a means towards eradicating Guinea-worm, the services of Rao Saheb Y.M. Pradhan, M.C.P.S., were entertained from 1st January 1928 and he was put in charge of the enquiry. The necessary staff having been engaged and equipment procured, a start was made in the Kolaba district by the end of the year. A report will be furnished in due course.

58. The number of deaths from Chief Causes for each collectorate, by months, are shown in Annual Forms Nos. VII to XII.



SECTION IX

SANITARY WORKS—CIVIL

*Municipalities*

59. The number of municipalities remained unchanged during the year. There are in all 156 with an aggregate population of 2,677,507. Their total income inclusive of opening balance for the year was Rs. 4,57,55,407 of which Rs. 1,50,50,092 or 33 per cent. was raised by taxation, giving an incidence per head of population of Rs. 5-9-6. Taxation varied between Rs. 15-0-5 in Karachi City to Re. 0-13-3 in the small municipality at Rahimatpur in Satara district. The figures include a special conservancy cess in the case of many municipalities.

The incidence of municipal income and taxation per head of population in the larger municipalities is as follows :—

							Income	Taxation
							Rs.	Rs.
Bombay	..	..	..	..	..	..	27	24
Karachi	..	..	..	..	..	..	30	15
Ahmedabad		..	..	..	..	..	11	9
Poona	..	..	..	..	..	..	11	7
Surat	..	..	..	..	..	..	8	6
Sholapur	..	..	..	..	..	..	7	6

The expenditure on public health measures came to Rs. 10 per head of population in Karachi city and averaged Rs. 3 for all remaining municipalities.

The following statement shows the birth and death-rates among the municipal population in each district. Out of 156 municipal towns, 13 suffered from small-pox, 10 from plague, and 38 from Cholera. Influenza was practically absent.

In 6 Revenue districts, as compared with 10 in 1926, the municipal death-rate exceeded 30 per 1,000 of population. Comment on death-rates in principal towns has already been given in paragraph 19.

*Statement showing birth and death-rates for Municipalities in  
the Bombay Presidency during the year 1927.*

Districts.	No. of Municipalities.	Ratio of births per 1,000 of population.	Ratio of deaths per 1,000 of population.				
			Cholera.	Small-pox.	Plague.	Influenza.	All causes.
Ahmedabad ..	9	40·80	·02	0·03	·00	·01	37·27
Kaira ..	8	38·39	·00	·00	·00	·00	29·33
Panch Mahals ..	2	47·47	·00	·12	·00	·00	19·89
Broach ..	3	43·73	·00	·00	·00	·00	27·17
Surat ..	3	36·92	·00	3·85	..	·01	32·30
Thana ..	4	21·45	·35	·08	·21	·02	19·20
East Khandesh ..	12	31·47	·81	·44	·01	..	20·67
West Khandesh ..	7	40·81	·25	·0	..	..	21·45
Nasik ..	8	27·09	·17	71	..	..	24·00
Ahmednagar ..	3	26·55	·13	·35	·00	·02	18·44
Poona ...	11	21·12	·37	2·29	·00	·00	35·17
Satara ..	12	26·65	2·86	·58	·05	·00	25·64
Sholapur ..	5	40·18	3·17	·14	0·03	·00	37·17
Belgaum ..	6	31·65	6·39	·48	2·21	·01	31·68
Dharwar ..	10	35·01	2·47	·00	2·01	·00	27·02
Bijapur ..	4	37·28	3·56	·01	·33	·00	31·17
Kanara ..	8	29·39	·21	·02	2·49	·00	24·73
Kolaba ..	7	21·89	·16	·07	1·35	..	18·19
Ratnagiri ..	4	26·69	·01	·27	·07	·01	20·57
Karachi ..	5	47·84	..	0·4	..	·03	28·53
Hyderabad ..	6	35·09	..	·13	..	..	26·50
Larkana ..	5	35·38	..	·24	..	..	23·03
Thar and Parkar ..	2	15·75	..	1·73	..	..	25·19
Nawabshah ..	2	19·45	..	·41	..	..	10·61
Sukkur ..	5	30·47	·25	·00	·00	·00	18·79
Upper Sind Frontier ..	1	17·86	..	..	..	..	1·76
Bombay Suburban ..	4	19·52	·12	·36	·45	..	19·00

60. The Assistant Directors of Public Health in the course of their regular tours and special visits make a point of conferring with the councillors of Local Bodies or their officers on matters that concern public health.

During the year, complete sanitary surveys of 11 towns were made and inspections or reports in the case of 108 more. Advice was given in all these and in numerous other cases in matters of water-supply, conservancy, prevention of spread of disease and in measures of a more general nature. Action was taken by many of the municipalities on the suggestions of the Assistant Directors of which the following is a brief summary.



Dhulia, Nandurbar, Chopda, Nasik, Gadag, Kalyan, Bandra, Dholka and Erandol constructed new latrines.

Bandra, Sinnar, Nadiad, Mehmedabad and Dharwar repaired latrines.

Parola, Dharwar, Haliyal, Guledgud and Bagalkot constructed new gutters.

Nandurbar secured land for a night-soil depôt.

Bhusawal repaired the existing drains and constructed a new beef market.

Bhusawal, Belgaum, Bagalkot and Erandol repaired markets and slaughter-houses.

Malegaon constructed a new drain.

Kurla constructed a storm-water drain about 1,700 feet in length.

Panwel engaged two sullage carts and purchased dust-bins.

Amalner constructed underground drains at a cost of Rs. 1,300.

Sirsi, Haliyal, Gadag, Igatpuri, repaired wells.

Nasik constructed new waste water drains 615 feet in length at a cost of Rs. 1,192.

Bandra purchased three motor lorries, two for cesspool service and one for haulage of town sweepings at a cost of Rs. 8,197.

Bulsar conducted a rat-campaign.

Broach distributed 11 lbs. of quinine among the poor people suffering from malaria.

Kaira opened a dispensary for malaria patients during the fever season.

Larkana constructed "U" shaped drains.

Jacobabad made improvements to their night-soil depôt and repaired roads and slaughter-houses.

Tando Adam purchased new rat traps at a cost of Rs. 117-8-0.

The Assistant Director of Public Health, Gujarat Registration District, states that the Nasik system of trenching night-soil is working satisfactorily in 11 towns. This system has proved a great success in Nadiad and Surat. These municipalities have realised Rs. 1,230 and Rs. 1,171, respectively, from the sale of poudrette, while Dohad and Broach realised Rs. 110 and Rs. 75, respectively. Godhra municipality reports that Rs. 52 were realised from the sale of poudrette and a further offer of Rs. 100 has been received from certain farmers. If this system is properly run with scrupulous attention to details, it should create a good demand for manure in Gujarat as well as in other towns where it is efficiently carried out. The system has been recently introduced in Malegaon, Dhulia, Dharangaon, Bhusawal, Jalgaon, Belgaum, Dharwar and Sukkur.

61. *Municipal Health Staff*.—During the year under report fully qualified Medical Officers of Health were employed in Karachi, Hyderabad, Ahmedabad, Surat, Poona and Sholapur. In Karachi and Ahmedabad qualified Assistant Health Officers were also employed. Dhulia, a second class municipal town, employed a Health Officer possessing the qualifications required for a first class town. Health Officers holding the medical degree of the Bombay University in addition to the Sanitary Inspectors' certificate were employed at Bandra and Bijapur. Nasik had a Health Officer possessing the qualifications of a Medical Officer for a second class town, while Dakore, Nadiad and Saundatti employed Licentiates of the College of Physicians and Surgeons holding Sanitary Inspectors' certificates. Dr. Gune, L.M.& S., continued to hold charge at Pandharpur.

Eighty qualified Sanitary Inspectors were employed in 36 towns as compared with 76 and 35 respectively in 1926 ; Ahmedabad 15 ; Poona 8 ; Sholapur 6 ; Surat 6 ; Karachi 3 ; Nasik 3 ; Ahmednagar, Pandharpur, Gadag, Bijapur, Hubli, Belgaum ; Sukkur, Hyderabad and Shikarpur 2 each ; and the following 1 each, Kalyan, Bandra, Malegaon, Igatpuri, Trimbak, Thana, Dhulia, Jalgaon, Bhusawal, Chopda, Amalner, Kurla, Barsi, Panchgani, Satara, Bagalkot, Viramgaon, Broach, Larkana, Tando Adam and Rohri.

62. *Training of Sanitary Officers*.—One hundred and two new students were on the class roll in Bombay, 83 of whom together with 31 students from previous classes made up the total of 114 that appeared for the Sanitary Inspectors' examination. Of these, sixty-three passed the examination and obtained the certificate of the Royal Sanitary Institute, London. Among the successful candidates were four medical graduates of the Bombay University, two L.M.P., one from Madras and the other from the Central Provinces, and three L.C.P.S.

More advanced classes were held for medical men and at a further examination 4 out of 6 were passed as qualified to hold the post of Medical Officer of Health in a second class town.

63. *Local Sanitation by Dispensary Medical Officers*.—Thirty-five Dispensary Medical Officers in Western Registration District, 10 in Central Registration District, and 10 in Gujarat Registration District, gave advice to local bodies and assistance in public health matters. The Medical Officers at Modasa, Dholka, and Sanand receive small allowances of from Rs. 5 to Rs. 10 from the municipality for such advice.

64. *Sanitary Board*.—Report published independently.

65. *Extension of Village Sites*.—Progress in this direction may be summarized as under :—

*East Khandesh*.—Two acres and 1 guntha of land were acquired for the village of Chitoda, Yawal taluka ; village planning was attended to.

*Ahmednagar*.—One acre and 39 gunthas of land were acquired for the village of Kandgaon, Nagar taluka.

*Poona*.—Survey No. 57 of Bhamburda (Poona) was acquired for rehousing the Mangs.



*Dharwar*.—Six acres and seven acres of land were acquired for the villages of Chinchali Jantli, Majre and Hulligudi, of Gadag Taluka, respectively ; 5 acres, 6 acres, 9 acres and 6 acres of land were acquired for the villages of Chikmarlihalli, Kodihalli B., Kaloore and Kanakapur of Karajgi Taluka, respectively ; 3 acres and 39 gunthas and 8 acres of land were acquired for the villages of Yalavagi and Masur villages of Bankapur and Kod Talukas, respectively.

*Bijapur*.—Ten acres and sixteen gunthas and 4 acres and 16 gunthas of land were acquired for the villages of Danyal and Hardoli of Bijapur and Badami Talukas, respectively.

*Upper Sind Frontier*.—Land was acquired in the village of Thul of Thul Taluka. The lay-out has been drawn by the Assistant Consulting Surveyor to Government.

66. *District and Taluka Local Boards*.—The aggregate income of the 27 District Local Boards and 222 Taluka Local Boards amounted to Rs. 1,67,81,957. Income and taxation per head of population were Rs. 1-1-7 and Re. 0-4-9, respectively, against Rs. 1-4-4 and Re. 0-5-1 in 1926. A total sum of Rs. 30,15,304 was spent by these boards on communications, while Rs. 10,37,920 were spent under the head of Public Health Works.

Under Government Resolution, General Department, No. 1570 of 1st April 1927, the following grants were placed at the disposal of the Commissioners of Divisions for distribution among the District Local Boards of the Presidency and Sind. These grants are intended to be utilized primarily for expenditure on roads and bridges :—

			Rs.
Northern Division	..	..	4,45,500*
Central Division	..	..	5,55,500
Southern Division	..	..	4,12,500
Sind	..	..	4,36,500

\* (Including the allotment for the Bombay Suburban Division.)

Under Government Resolution, Revenue Department, No. 5607-24 of 21st April 1927, the following grants were placed at the disposal of Commissioners of Divisions for distribution among the District Local Boards of the Presidency and Sind for improvement of village water supplies : Northern Division Rs. 1,34,600 ; Central Division Rs. 78,000 ; Southern Division Rs. 24,000 ; Sind Rs. 10,800 and Bombay Suburban Division Rs. 2,000. These grants were supplemented by allotments from Local Funds and popular contributions, and were expended on constructing wells, tanks, troughs and cisterns, in repairing old wells and closing step-wells and in boring operations.

Five hundred and thirty-seven draw wells were constructed during the year of which 66 and 80 were in Kanara and Surat districts, respectively. Thirty-eight step-wells were converted into draw wells.

67. *Notified Areas.*—There were 25 Notified Area Committees working in the Presidency during the year under report as compared with 23 in the previous year (committees which had not commenced work are excluded).

The population served by these committees was 95,971 and the total income from revenue excluding opening balance came to Rs. 4,40,222, giving an incidence of income per head of Rs. 4-9-4. The following tables show the details of income and expenditure and the combined birth and death-rates for Notified Areas in each district :—

*Statement showing income and expenditure of the Notified Area Committees in the Bombay Presidency during the year 1927-28.*

Districts	Serial No.	Names of towns and villages	Population	Income including opening balance	Expenditure	Closing balance
				Rs.	Rs.	Rs.
Bombay Suburban ..	1	Andheri ..	6,211	82,857	70,228	12,629
	2	Borivli ..	5,957	19,012	16,643	2,369
	3	Malad ..	8,520	23,188	20,599	2,589
	4	Santa Cruz ..	6,092	1,57,946	1,25,262	32,684
	5	Vile Parle ..	7,479	1,28,368	1,23,335	5,033
	6	Kandivli ..	3,444	11,060	10,089	971
	7	Ambernath ..	3,265	8,806	2,954	5,852
	8	Chembur ..	3,191	3,652	2,929	723
Nasik ..	1	Manmad ..	7,260	34,690	13,359	21,331
Ratnagiri ..	1	Rajapur ..	6,331	18,043	15,095	2,948
	2	Dapoli ..	2,689	12,617	6,495	6,122
	3	Khed ..	3,842	31,898	21,844	10,054
Bijapur ..	1	Hungund ..	5,563	4,585	4,419	166
Sukkur ..	1	Koti Sultan ..	1,696	1,940	1,352	588
	2	Mirpur Mathelo ..	1,642	1,528	1,325	203
	3	Ubanro ..	1,716	2,933	2,257	676
	4	Khairpur Dahorki.	1,657	3,921	1,884	2,037
Nawabshah ..	1	Kandiars ..	3,013	2,305	1,404	901
	2	Naushahro ..	3,400	2,683	2,659	24
	3	Nawabshah ..	2,073	30,054	24,290	5,764
Larkana ..	1	Mechar ..	2,746	17,508	9,568	7,940
	2	Khairpur Nathan-shah.	1,484	3,725	1,911	1,814
	3	Dadu ..	2,996	7,528	3,444	2,084
Hyderabad ..	1	Tando Jam ..	2,634	4,397	2,029	2,368
Poona ..	1	Talegaon Dabhade	1,080	1,231	789	442
	25		95,972	6,14,475	4,86,163	1,28,312



*Statement showing by districts combined birth and death-rates for  
Notified Area Committees in the Bombay Presidency during the  
year 1927-28.*

Districts				No. of Notified area commi- tees	Ratio of births per 1,000 of popu- lation	Ratio of deaths per 1,000 of population				
						Cholera	Small- pox	Plague	Influenza	All causes
Bombay Suburban	..	..	..	8	12·14	·07	·34	·05	..	11·29
Nasik	..	..	..	1	22·34	·34	2·53	..	..	16·43
Ratnagiri	..	..	..	3	32·79	..	0·15	..	..	23·20
Bijapur	..	..	..	1	31·46	5·57	..	..	..	25·17
Sukkur	..	..	..	4	30·74	..	..	..	..	23·26
Nawabshah	..	..	..	3	22·86	..	·11	..	..	16·66
Larkana	..	..	..	3	19·37	..	..	..	..	24·35
Hyderabad	..	..	..	1	22·69	..	..	..	..	19·23
Poona	..	..	..	1			Not available			

No works of importance were carried out during the year except that the Manmad Notified Area Committee made improvements in the disposal of sullage water, purchased a cylinder cart for the removal of sullage water, as well as a Bombay type drain cart, and disinfected some wells. The Santa Cruz Notified Area Committee purchased two new night-soil carts and repaired roads, while the Andheri Notified Area Committee made arrangements to dispose of night-soil on the Nasik system. The Mirpur Mathelo Notified Area Committee made improvements to wells.

68. *Village Sanitary Boards.*—There are two Sanitary Boards working in the Presidency, viz., one at Siddapur in Kanara district and the other at Mandal in Ahmedabad district. Their total income including opening balance was Rs. 2,750 while expenditure amounted to Rs. 2,423 leaving a closing balance of Rs. 327.

69. *Sanitary Committees and Village Panchayats.*—During the year there were working in all 588 Sanitary Committees and Village Panchayats.

Details of income and expenditure and of birth and death-rates for the population under their administration are given in the following tables :—

*Statement showing, by districts, income and expenditure of Village Panchayats and Sanitary Committees in the Bombay Presidency during the year 1927-28.*

District	Number of village Panchayats and Sanitary Committees	Total income including opening balance	Popular contribution	Total expenditure	Closing balance
		Rs.	Rs.	Rs.	Rs.
Ahmedabad .. ..	2	5,132	2,137	4,308	824
Kaira .. ..	27	45,538	12,935	20,951	24,587
Panch Mahals .. ..	4	5,662	4,940	4,761	901
Broach .. ..	17	37,889	11,062	21,615	16,274
Surat .. ..	15	20,432	7,715	13,118	7,314
Thana .. ..	33	40,031	20,773	29,866	10,165
Total, Northern Division ..	98	1,54,684	59,562	94,619	60,065
East Khandesh .. ..	36	1,93,429	....	1,15,674	77,755
West Khandesh .. ..	13	33,264	7,913	21,414	11,850
Nasik .. ..	26	39,258	7,531	18,762	20,496
Ahmednagar .. ..	17	49,516	10,432	36,037	13,479
Poona .. ..	19	46,735	12,460	25,665	21,070
Satara .. ..	16	8,181	4,536	5,100	3,081
Sholapur .. ..	5	10,032	....	9,280	752
Total, Central Division ..	132	3,80,415	22,872	2,31,932	1,48,583
Belgaum .. ..	41	51,483	11,351	25,377	26,106
Dharwar .. ..	47	58,567	17,188	31,879	26,688
Bijapur .. ..	29	29,677	8,087	16,943	12,734
Kolaba .. ..	22	16,498	5,810	10,265	6,233
Ratnagiri .. ..	4	2,875	733	1,800	1,067
Total, Southern Division ..	143	1,59,100	43,169	86,272	72,828
Karachi .. ..	42	38,589	6,374	16,823	21,766
Hyderabad .. ..	43	49,665	9,178	25,237	24,428
Larkana .. ..	47	40,921	9,768	23,132	17,789
Thar and Parkar .. ..	26	36,746	8,009	19,103	17,653
Nawabshah .. ..	27	36,824	7,600	20,460	16,364
Sukkur .. ..	17	20,332	4,858	10,773	9,559
Upper Sind Frontier .. ..	12	25,018	9,336	14,956	10,062
Total for Sind ..	214	2,48,095	55,113	1,30,484	1,17,611
Bombay Suburban .. ..	1	6,072	3,668	4,106	1,966
Grand total ..	588	9,48,366	2,19,384	5,47,413	4,00,953



*Statement showing by districts, combined birth and death rates for  
Village Panchayats and Sanitary Committees in the Bombay  
Presidency during the year 1927.*

District	Number of village Pancha- yats and Sanitary Commit- tees.	Ratio of births per 1,000 of popu- lation	Ratio of deaths per 1,000 of population				
			Cholera	Small-pox	Plague	Influenza	All causes
Ahmedabad ..	2	27·08	..	..	..	..	26·06
Kaira ..	27	35·71	·00	·02	·00	·00	26·19
Panch Mahals ..	4	48·34	..	..	..	..	25·29
Broach ..	17	38·48	0·00	·53	·00	·00	22·84
Surat ..	15	40·21	·00	·79	·00	·00	23·18
Thana ..	33	28·85	·04	·07	..	·02	15·87
East Khandesh ..	36	49·34	2·06	1·00	..	..	32·11
West Khandesh ..	13	49·72	·18	·15	..	..	27·55
Nasik ..	26	48·14	·30	·45	..	..	27·81
Ahmednagar ..	17	36·57	·76	·20	·01	..	22·58
Poona ..	19	30·96	1·59	0·11	..	..	19·67
Satara ..	16	40·15	5·59	0·12	0·80	..	28·63
Sholapur ..	5	32·88	5·46	0·16	0·00	..	26·38
Belgaum ..	41	39·79	9·49	·15	·83	..	32·42
Dharwar ..	47	41·57	3·76	·04	2·53	..	3·59
Bijapur ..	29	41·29	2·84	·02	2·12	..	25·91
Kolaba ..	22	37·29	·26	..	·11	..	23·39
Ratnagiri ..	4	26·48	..	..	..	..	22·89
Karachi ..	42	28·54	..	..	..	..	27·73
Hyderabad ..	43	23·26	..	..	..	..	24·90
Larkana ..	47	26·15	..	..	..	..	20·16
Thar and Parkar ..	26	27·00	..	..	..	..	34·97
Nawabshah ..	27	31·29	..	·10	..	..	20·69
Sukkur ..	17	60·04	·40	..	..	..	32·19
Upper Sind Frontier ..	12	40·26	..	..	..	..	22·25
Bombay Suburban ..	1	18·75	..	·88	..	..	18·08

The Assistant Directors of Public Health during their tours inspected the sanitary arrangements of the villages where Committees or Panchayats existed and their recommendations for improvements were forwarded to the Revenue Officers concerned.

Examples of useful work done by Sanitary Committees and Village Panchayats are given below :—

Nampur constructed a well for mangs. Goregaon repaired roads, and removed night-soil regularly and properly. Tale engaged a sweeper

to conserve the village and removed silt from the tank. Pimprala, Palaskhede, Kurhe, Warangaon, Thorgavan, Nagardeola, Umbergaon, Nargol and Nagothana sterilized wells. Jamner and Pahur spent Rs. 1,478 and Rs. 1,822 on conservancy respectively. Palaskhede closed step-wells and pit privies. Tarapur, Virar and Khardi paid attention to conservancy. Adawad and Lasalgaon constructed latrines. Nawapur and Dindori constructed gutters. Bhadgaon and Dindori purchased disinfectants. Lohare purchased rat-traps. Ghote Budruk conducted a rat destruction campaign. Nasirabad (Larkana district) carried on improvements to wells and sanctioned the purchase of some dustbins. The Halalkhore cess system was started and half the khad was filled up with rubbish. The butchers and fish sellers on being warned to keep their stalls clean, procured zinc plates with which to cover their wooden planks. Thauri Mohbat (Larkana district) applied for land for the construction of a slaughter-house (mud enclosure) and also took steps to improve registration of vital statistics. Radhan (Larkana district) carried on improvements to wells and meat stalls.



## SECTION X

### GENERAL

#### *Public Health Laboratories*

70. The Poona and Karachi Public Health Laboratories continued their valuable work throughout the year. Some bacteriological and pathological work was also done at the Municipal Laboratory, Ahmedabad.

*Poona Laboratory.*—Dr. J. B. Mama was in charge of the Public Health Laboratory till 19th April 1927 when Dr. F. Barretto took over. A large amount of analytical work, mostly in connection with water-supply was carried out during the year. Routine bacteriological examination of samples from the three main supplies of Poona, viz., the Cantonment, City of Kirkee was carried on, as in past years, to maintain a check on the efficiency at each stage of the processes of purification. Thus :—

The samples from Poona Water-Works included 268 of raw canal water, 195 settled water, 79 alummed, 275 filtered water and 275 chlorinated water.

Close on 401 samples from taps supplied from the service reservoirs were also analysed.

Raw canal water to the extent of 268 samples, and 275 tap samples (chlorinated) were analysed for Poona City supply.

Samples of water examined from the Pashan Water-Works are :— Lake water 97, water from tap of filter beds 98, filtered water 96, chlorinated 276 and tap water 36 ; while from the Holkar's Bridge river water 16 samples, filtered water 17, chlorinated 76, and tap water 15 were analysed.

One hundred and twenty water samples were received from various municipalities. A good deal of experimental work was also done. The total for the year was 3,532 samples examined bacteriologically and 5,894 chemically.

Chemical work for Poona Cantonment Water-works included examination of 253 samples of raw water ; 135 filtered water and 260 chlorinated water ; for Kirkee Water-Works, 46 raw water. Ninety-three samples from out-stations were also examined.

Besides these 873 samples were analysed for estimation of strength (in chlorine) of bleaching powder ; 287 for determination of alum dose ; 321 for sewage effluent and 20 for foods, drugs and chemicals.

At the request of the Chief Medical Officer, M. & S. M. Railway, Madras, Dr. Barretto visited Hubli to examine the Jewell Filters which have been installed there by the Railway Authorities. A series of samples was examined daily on the spot. He also visited Mahabaleshwar to inspect the water-supply and arrangements for chlorination. Every assistance was rendered by the laboratory during the Alandi Fair which he visited personally to see to the chlorination of the water-supply.

In the course of his duties he visited Pashan, Yeravda, Kirkee, Hadapsar, Poona City Water-Works, the various reservoirs and septic tanks in the city and some private houses in connection with complaints regarding over chlorination. Some of these places were visited on several occasions.

An investigation was carried out regarding the source and causative agent of dysentery which attacks a number of both Jail staff and convicts at the Yeravda Central Jail during the monsoon period every year. This entailed the examination of stools of cases attacked with the disease, and carriers amongst those engaged in the handling of food as well as of flies and samples of drinking water. The causative agent was found to be *B. Flexner*.

The filters at the Holkar's Bridge Water-Works, Kirkee, are only brought into commission during the monsoon and are out of use for the rest of the year. Bacteriological tests were carried out with the object of ascertaining the difference in a filter bed allowed to run dry and one kept full of water when not in use.

Of the three units at the Holkar's Bridge Water-Works, one filter No. 2 was completely emptied and the other two were maintained full during the time the working of the filters was discontinued since January 1927.

The filters re-started work in June 1927 and samples of water taken from the outlet of each filter gave results which showed that the dry filter required about a month longer to regain its efficiency than the other two units.

A series of experiments was made to determine the minimum dose of chlorine required to obtain absence of lactose fermenters in 100 c. c. in the case of canal and filtered water (Poona Cantonment Water-Works) as compared with the dose actually used by the Sims Woodhead Method.

With regard to canal water no difference was observed, the dose required to obtain "0 in 100" being 0.2 to 0.3 parts per million in either case. For the filtered water, however, the minimum quantity required was 0.1 part per million, the actual dose used (Sims Woodhead Method) being 0.21 parts per million.

As instructed by the Director of Public Health, Poona, several tests were carried out on "Chlorogen" to determine whether the dose prescribed on the label, *i.e.*, 1 drop per gallon of water was sufficient for sterilization. The results showed absence of lactose fermenters in 100 c. c. of the sterilized water in every case.

One of the slow sand filters at Pashan Water-Works having been re-graded was tested in order to ascertain the period it takes to mature but the results of examination did not appear to be conclusive. In connection with the Local Board Conference at the Council Hall, Poona, on July 15th and 16th, 1927, a Health Exhibition was held of which Dr. Barretto was in charge. Twenty delegates and 20 ladies from the Seva Sadan, Poona, visited the Water-Works and the Public Health



Laboratory where details of all the work done for the purification of the Poona Water-supply was demonstrated to the visitors. Instructions in laboratory technique were given to 4 medical graduates, the Medical Officer of Health, Dhulia, the Chief Officer, Dhulia Municipality, Mr. B. Rebello, B.Sc., of Messrs. Dharamsi Morarji & Company and the Assistant Surgeon, District (Military) Laboratory, Poona.

The Interchange of Public Health Personnel under the auspices of the League of Nations also visited the Laboratory. The party consisted of 18 Medical Officers of different Eastern Nations, accompanied by the Public Health Commissioner with the Government of India. They were shown round the Water-works and a demonstration was given of all the work carried on at the laboratory in which they showed keen interest.

*Karachi Public Health Laboratory.*—Dr. F. Barretto, D.P.H., was in charge of the laboratory upto 11th April 1927 when he handed over to Dr. R. V. Shiveshwarkar, Assistant Director of Public Health, Sind R. District, from whom Dr. Bhujanga Rao took over on 12th May 1927 continuing to hold charge till the end of the year. Government as a measure of economy having combined the Chemical Analyser's and the Public Health Laboratory, *vide* Government Resolution, General Department, No. 3740 of 27th March 1927, changed the name to Chemico-Bacteriological Laboratory. The two laboratories are located for the present in their old buildings one at Kiamari and the other on the Artillery Maidan. It is hoped that they will be shortly located in one building. The daily routine examination, bacteriological and chemical, of the raw and chlorinated water from Karachi Water-works has been performed throughout the year. The raw water is also daily tested for the dosage of bleaching powder required for sterilization. Samples of chlorinated water from various taps in the city have also been regularly tested.

The work of the Public Health Laboratory shows a steady increase as the municipalities and local bodies are now taking more interest in the nature of the work turned out by the laboratory. The Karachi Municipality, for instance, sent 2,737 articles which included samples of water, ghee, milk, edible oils, bleaching powder for chemical examination, and throat swabs, samples of blood, milk, water, etc., for bacteriological examination. A noteworthy feature is the number of cases filed by the Karachi Municipality in connection with adulteration of edible oils with mineral oil. Out of the nine cases thus challenged, six vendors of the adulterated oils were fined, one case was withdrawn and the remaining two are pending in the court. The mineral oil content was found on an average to be 10 per cent.

Blood specimens were received for diagnostic purposes while cases of typhoid and para typhoid were occurring in the city of Karachi.

During the year, 1,354 samples were examined bacteriologically and 1,638 chemically.

Every precaution was taken to regulate the dose of chlorine in order to avoid complaints about chlorination but at the same time to keep the water-supply satisfactory and up to a recognised standard even on days

of flooding of the Malir River from which the water is obtained. Plans and estimates were prepared by the Karachi Municipality to instal a chloronome apparatus.

The Sukkur water-supply which is drawn from the Indus and filtered through Paterson rapid filters was visited. Samples of raw, settled, filtered and chlorinated water were regularly sent every week to the laboratory as well as samples of bleaching powder. The filters are now working satisfactorily.

In addition to the Karachi and Sukkur water-supplies, samples of water have been regularly examined for the Royal Air Force, Drigh Road. A large number of samples have also been received from the Sukkur Barrage Works and from the prisons at Karachi and Shikarpur.

Three hundred and eighteen food-stuff samples were examined. There were 195 samples of milk, 78 of ghee and 36 of edible oils from the Karachi Municipality.

Eighty-one samples for blood sugar tests, sputum, widal, throat-swabs and fæces received from the Karachi Civil Hospital, District Prisons of Karachi and Shikarpur and Government Dispensary, Karachi, and Port Trust, Karachi, were diagnostically examined.

Dr. Bhujanga Rao rendered help in connection with the "Health Week" held in Karachi in June 1927.

The laboratory is made use of more and more by medical practitioners and others for the examination of blood, etc., as the following details of work performed during the year will show :—

Doses of Auto-vaccine issued	..	..	108
Blood sugar test	..	..	3
Urine examination	..	..	31
Throat swabs	..	..	8
Blood examination	..	..	5
Widals	..	..	2
Miscellaneous	..	..	35
			<hr/> 192
Tintometer readings	..	..	719
Humidity readings	..	..	288
			<hr/> 1,199

#### *Fairs and Festivals*

71. *Pandharpur*.—The chief day of the Ashadi Fair fell on 10th July 1927. The total number of pilgrims who paid the tax was 128,127 and there were 5,172 exemptions.

Medical supervision by Dispensary Medical Officers along the routes followed by the palkhis was provided by the Surgeon General. The



Inspector of Sanitation, Poona District, accompanied the Alandi palkhi to Nira, the end of his jurisdiction, where he handed over to the Inspector of Sanitation, Satara, N. D., who accompanied this palkhi from Lonand to Dharmapuri. The Inspector of Sanitation, Satara, S. D., accompanied the Machindranath palkhi throughout its march in the Satara District. The Inspector of Sanitation, Ahmednagar District, accompanied the Nivrittinath (Trimbak) palkhi throughout its march in the Ahmednagar District. The water-supplies at camping grounds were disinfected after the departure of palkhis. The Assistant Director of Public Health inspected the Dnyaneshwar (Alandi) and Tukaram (Dehu) palkhis at their earlier halting places, Eknath, Muktabai (Jalgaon) and Janardan Swami's palkhis at Karkamb, and Dnyaneshwar and Sopankaka palkhis at Bhandi Sheogaon. All the palkhis were inspected at Wakhri. Sub-Assistant Surgeons were sent by the Civil Surgeon, Sholapur, to accompany the palkhis as they entered that district.

*Arrangements at Kurduwadi.*—The arrangements in connection with the provision of sanitary and medical facilities were under the control of the Civil Surgeon, Sholapur. A night-soil cart of 200 gallon capacity purchased during the year was available for use.

*Arrangements at Wakhri.*—The water reservoir was filled on 26th June, and was treated with alum and potash permanganate. Trenches were provided for the use of pilgrims. A cholera hospital was opened as usual. There were four admissions from the followers of Shri Dnyanoba's palkhi. One of these died and the remainder were removed to Pandharpur.

The usual medical arrangements were ready well before the pilgrims began to arrive in Pandharpur. Thirty-one Sub-Assistant Surgeons and medical students were employed. The Infectious Diseases Hospital was in charge of Dr. G. P. Phadke, the Municipal Medical Officer. The incoming and outgoing pilgrims were inspected at the railway station and at the Octroi nakas. Ambulances for the immediate removal of the sick were provided at the nakas. Nine Inspectors, four Sub-Assistant Surgeons and ten Sanitary Inspectors made house to house inspections daily, infectious cases and contacts being isolated.

Eleven qualified Sanitary Inspectors and the usual extra staff of sweepers, scavengers, etc., were also entertained.

*Night-soil and latrines.*—Four sets of trench latrines were provided and the usual conservancy arrangements made.

*Food-supply.*—Food-stuffs for sale were regularly inspected and when found unfit were destroyed. The District Magistrate issued orders prohibiting sale of mangoes during the fair days.

*Water-supply.*—Water-supply was sufficient and was permanganated daily. All the wells in and around Pandharpur were permanganated also. Men were posted to three important wells with ropes and buckets to serve water to pilgrims.

*Health of pilgrims.*—The pilgrimage lasted for five days 1,33,500 pilgrims visiting Pandharpur during this time, 266 attacks and 163



deaths from cholera occurred. Out of these 36 attacks and 14 deaths occurred among the 60,000 followers of the palkhis, the remaining 230 attacks and 149 deaths being among the 70,000 pilgrims or so who travelled unattended and more or less unwatched. In Pandharpur town itself, with a population of 25,210 invaded as it was by about 150,000 pilgrims from all parts of the country some of which were badly infected with cholera, there were only 58 attacks and 30 deaths and the outbreak in the town lasted only 19 days. Careful enquiries were instituted and which revealed that only 41 places in the Presidency became infected through returning pilgrims and there were only 201 attacks and 80 deaths resulting.

The hospital was kept open during the whole month of July, the maximum number of patients under treatment at one time being 80 on 12th July.

At the Kartiki Fair at Pandharpur which is next in importance to the Ashadi, the average attendance was about 94,207. The staff engaged during the fair included 15 Sub-Assistant Surgeons, 9 Sanitary Inspectors and 101 bhangis.

*Alandi.*—The big day of the Kartiki fair fell on 20th November 1927. The Assistant Director of Public Health visited Alandi before and during the fair and made suggestions and supervised the arrangements. No cholera cases occurred.

Sanitary arrangements were also provided at the fairs at Shingnapur (40,000 pilgrims) and at Shirala (25,000 pilgrims). All other smaller fair centres in the Central Registration District were free from any epidemic diseases.

In the Western Registration District, the principal fairs at Nasik and Trimbak were the Nivrutti in January, the Mahashivratra in March, the Ramnavami in April and the Kartiki in November 1927. The number of pilgrims during these "Parvanis" varied considerably, ranging from about 1,000 during the Kartiki to 27,038 during the Nivrutti fair.

The Assistant Director of Public Health inspected the fair areas before, during and after the festivals at all odd hours, and at times without giving previous notice to the Local Sanitary Authorities.

The sanitary measures adopted at these fairs included:—

(1) As regards the water-supply the storage reservoirs, storage cisterns in the city, and the Indra Kund were regularly sterilized.

(2) The people were prohibited from bathing in the Kunds reserved for drinking purposes, and this was specially done by providing extra guards over the flow of the river.

At Trimbak chlorinated water was provided all through the day and night during festivals. Public wells were regularly sterilised during the fair.

The "Kushavarta" tank was treated with bleaching powder every evening during the fairs, and a day after the fair. The tank was emptied



and cleaned four times during the year under report, *viz.*, in January, February, May and July.

There were 102 attacks and 56 deaths from small-pox and 15 attacks and 11 deaths from cholera at Nasik.

Saundatti-Yellamma Fair (January, November and December) in the Belgaum district, Yamnur (March) in the Dharwar district and Gokarn (March) in the Kanara district are three important fair centres in the Southern Registration District to which people from all parts of the Presidency are drawn. The total number of pilgrims attending the fairs is about 10 to 80 thousand in the first, nearly 80 thousand in the second and about 22 to 25 thousand in the last one. All the wells at these pilgrim centres were sterilized during the fairs under the direct supervision of the Inspectors of Sanitation and Vaccination of the districts concerned.

The Yamnur fair was responsible, to a certain extent, for the outbreak of cholera in the Southern Registration District. The Assistant Director of Public Health camped at Yamnur during fair days and personally advised the local municipality and the Mamlatdar as to the sanitary arrangements. Finding the staff of the municipality inadequate he requested the Assistant Superintendent of Police on duty to indent for a large number of police. An extra force of police was brought during the night by special motors from Dharwar and Gadag. The water-supplies were strongly guarded by the police. The Sanitary Inspectors personally looked to the sterilization of water-supplies and other sanitary arrangements. The Collector attended the fair as the principal day was 23rd March 1927. On detection of one case of cholera on the night of 22nd the Assistant Director of Public Health strongly advised the immediate dispersal of the fair. This was done on 24th. Realising the possible danger by returning pilgrims he sent an urgent personal request to the District Surgeon, M. & S. M. Railway, Hubli, to arrange for inspection of pilgrims at all stations from Bijapur to Dharwar. Vaccinators were placed at Dundur and Annigeri stations to watch the returning pilgrims. The Presidents of Hubli, Gadag, Bijapur and other municipalities and also Presidents of District Local Boards were informed, by wire, of the outbreak of cholera at Yamnur and the impending danger by returning pilgrims.

The festivals at Vautha in Dholka Taluka and Shukaltirth in Broach Taluka were both held on 27th November 1927 at which 10,000 and 35,000 pilgrims assembled respectively. The sanitary arrangements were satisfactory at both places.

The "Manekthari Punem" Fair was held at Dakore in the 2nd week of October 1927. The influx of pilgrims was greatest, *viz.*, 33,249 on the fair day, the total number visiting the place from the 9th to 12th being 44,262 exclusive of persons who were exempted from the pilgrim tax. The precautionary measures adopted by the municipality under the guidance of its Health Officer were satisfactory.

The services of Inspectors of Sanitation and Vaccination were placed at the disposal of the district officials for fair duty whenever it was possible to do so.

The Lal Shahbaz Fair at Sehwan (Sind) was held from 22nd to 24th February 1927 and was attended by 30,000 pilgrims.

No Government Medical Officer was deputed on special duty. No arrangement for the medical inspection of the pilgrims was carried out at the railway station. The Municipal Dispensary was kept open for the treatment of pilgrims.

The Inspector of Sanitation and Vaccination, Karachi District, who was deputed to Sehwan on special duty in connection with the fair, was in charge of the sanitation of the town. He, with the assistance of the Municipal Secretary, sterilized all the wells that were used by the pilgrims for drinking purposes.

Fortunately, no cases of any infectious diseases occurred during the fair.

The Municipality spent Rs. 308 for the benefit of the pilgrims out of Rs. 1,146 realized as Pilgrim Tax.

All precautionary measures were adopted in connection with the Kumbha fairs at Hardwar and Brindaban in pursuance of the circular received from the Director of Public Health, United Provinces, to the effect that the inoculation of intending pilgrims to these fairs with anti-cholera vaccine free of charge should be advocated.

No information regarding imported cases of any epidemic diseases from these places was received.

An interesting feature in connection with these fairs is the increasing interest which is being taken by the pilgrims in the arrangements made for their welfare. The Assistant Director of Public Health, Central Registration District, reports that there is a demand on the part of the pilgrims for more of the money which is subscribed by them in the form of taxes to be devoted to safe-guarding their health and comfort, and the formation of a Pilgrim Association with this end in view is under contemplation. This is all to the good.

### *Sanitary Associations*

72. There were 10 Sanitary Associations working in the Presidency. All continued to do useful work as the following examples show :—

*Karachi Association.*—During the year under report, 986 maternity cases as compared with 1,059 were conducted by the Association Midwives and supervised by Lady Health Visitors.

There were 7 midwives in charge of different quarters of the city, 5,440 house to house visits were paid by the Lady Health Visitors for the purpose of supervising maternity cases and giving advice on the care and nurture of infants as against 3,485 in 1926.

In the Bherumal Thakurdas Maternity Home 445 mothers made use of the facilities provided, an increase of 57 cases over the last year. No



fatal case occurred and all mothers left the Home in good health. Of the 362 children born, 194 were males and 168 females. 230 ante-natal cases were treated for various disorders. In addition, 918 Gynæcological cases were examined, on which 23 operations were performed successfully. The Secretary of the Association writes, "All needs are provided in the Home to the satisfaction of the patients and the Association is ever ready to still enhance the usefulness of the Home." The midwives conducted 1,026 labour cases in the different quarters of Karachi against 945, being an increase of 81 over the preceding year. Three cases proved fatal, 20 children died within 10 days of birth. Out of the labour cases mentioned above, 619 were attended to free of charge and for the remaining 407 Rs. 2,895 were received. Midwives were paid Rs. 1,632 for satisfactorily conducting maternity cases and Dais Rs. 23-8-0 for bringing labour cases for treatment by the Association nurses.

At Hyderabad, the training of native "Dais" in maternity work was continued under the guidance of Miss Piggott whose organization has been extended to include 10 centres.

During the year, 86 new dais received instruction of whom 9 successfully passed an examination test. Forty new towns and villages were visited and 7,575 women attended lectures delivered by the staff. Miss Piggott reports that in only one place were the dais found indifferent to her persuasion and teaching—a satisfactory and encouraging result. Miss Piggott observes that "anybody who thinks the work is completed when the dais are trained is vastly mistaken. . . . . regular supervision is most important". All engaged in similar enterprises should recognise the truth of this statement. Its application extends to health work in general and is the key-note of successful administration.

*Red Cross and Health Societies, Hyderabad.*—The Red Cross Society has been helping the municipality by contributing to the current expenses of the Municipal Child Welfare centres. Its trained Dai has also been conducting labour cases free of charge. The Health Society has carried on its work regularly under the presidentship of Dr. Valiram.

*The Mrs. Hamid Ali Red Cross Maternity Home, Larkana.*—This Home was started in November 1925. The Honorary Secretary states in his report that the Maternity Home's popularity has been increasing every month, women from neighbouring talukas making use of indoor as well as out-door facilities. 192 deliveries were conducted of which 132 were indoor and 60 out-door as compared with 213 (120-93) in 1926. The Secretary writes that for Red Cross work, leaflets on health topics were distributed. Magic lantern and health slides of the Society were given to local Collegians who delivered lectures on health topics to both women and men in Larkana town and district during their holidays.

In the Ishwarbhai Maternity Home at Shikarpur, 407 cases were conducted, 318 inside the Home and 89 outside as against 403 in 1926.

The Health Association, Shikarpur, delivered 14 public lectures. Medical members of the Association in charge of the principal hospitals



and dispensaries met frequently and considered the monthly figures of birth, diseases and deaths and planned lectures on public health.

The organizer delivered a lecture on the health of Hyderabad, under the auspices of the Health Association, Hyderabad, circulated the Health Alphabet and wrote several articles on health in Sindhi papers. Dr. Satibar Thakur conducted first aid classes for school girls.

A delivery room was fitted up with the necessary apparatus and instruments.

The Broach Sanitary Association has a long list of useful work performed during the year to its credit. The Association delivered 39 lectures in the city and 22 in the district on malaria, small-pox, child-welfare and the care of teeth. A Health Show was also held at the Shukaltirth fair. The Association distributed 12,000 quinoidine tablets and a few quinine packets free, while 15,000 quinoidine tablets were sold in villages of the district and the city.

Leaflets on consumption, child-welfare, malaria and fly nuisance were freely distributed. In co-operation with the Red Cross Society relief work, the Association organised two table dispensaries in the mill area of the city and 24 in the district. 756 patients were treated in the city and 2,078 in the district. The workers were first given a 3 days' course of instruction by Dr. P.\*P. Balsara, Civil Surgeon.

With a grant of Rs. 1,500 from Government and subscriptions from the public, the Broach Sanitary Museum prepared exhibits of different subjects of public health interest.

The Ahmedabad Sanitary Association organised 67 magic lantern lectures in different parts of the city. In these lectures, slides on maternity and child-welfare, water-borne diseases, cholera, house-fly, tuberculosis, malaria, small-pox and temperance were exhibited. Nine sanitary rounds were organised, 7 of which were carried out.

The inspection of the city by 2 Health Visitors (one paid, the other honorary) continued throughout the year. 385 complaints of nuisances were forwarded to the municipality.

An application complaining about the pollution of the river water near the Shahpur Gate by washermen who carry on bleaching works by the side of the river bank and allow the waste water to flow into the river was received. The question of river pollution was considered by the Health Committee of the Association and a letter was addressed to the President of the Municipality.

During the flood in Gujarat the paid staff performed relief work in conjunction with the members of the International Theosophical Order of Service by collecting information about losses in the villages and distribution of corn, clothes and quinine.

As a result of the resolution moved in the Municipal Board by Dr. Soloman, the General Board of the municipality resolved to have medical examination of municipal school children by doctors at least once



a year. The Association hopes that the resolution of the General Board will soon come into operation.

Government sanctioned an annual grant of Rs. 1,000 to the Association to be spent in consultation with the Director or Assistant Director of Public Health. The Association decided to appoint a Lady Health Visitor.

Khan Bahadur Dr. B. H. Nanavatty, F.R.C.S., Vice-President, and Dr. J. E. Soloman, L.M. & S., Honorary Secretary, were deputed as the Association's representatives at the Conference on Maternity and Child Welfare held in Delhi. They took part in the debates of the conference.

In the month of November 1927, Dr. Jamshyd Munsiff, Officiating Director of Public Health, visited Ahmedabad and took part in a conference with the Association which forwarded a variety of resolutions to the municipality.

The Surat Sanitary Association delivered nine lectures on subjects of public health interest, of which four were accompanied by cinema shows. Demonstrations on the management of labour were also given during these lectures. The number of Dais present was 50 out of a total strength of 80.

The Dharwar Sanitary Association has been merged into local branch of the Red Cross Society of which the Collector is President. Definite rules were framed for the constitution of the Society during the year. The Society received a sum of Rs. 6,782 as interest on the fixed deposits in the local banks. An extra amount of Rs. 509-12-0 was collected in the shape of subscriptions from the life members enrolled under the new rules. Rs. 6,665 were spent on the building work of the Red Cross Maternity Hospital. Comforts were supplied to various dispensaries and hospitals in the district to the extent of about Rs. 800. Equipment for the Maternity Hospital was also purchased.

Six Red Cross Midwives were working in the district by whom 164 cases were attended. One of these midwives has also to work in Dharwar town as a Health Visitor. Three pupils were sent to Belgaum Civil Hospital for training in midwifery with a scholarship of Rs. 30 per mensem each.

The Red Cross Maternity Hospital was opened on a small scale and is in charge of the Lady Assistant Surgeon attached to the Civil Hospital.

The Bombay Sanitary Association did much good work during the year under report.

Dr. D. S. Bhandarkar, M.B.B.S., continued to act as a part-time lecturer in Hygiene and delivered 52 open air lectures to the working class occupants of the chawls.

Film demonstrations were given on 58 occasions during the year, 18 in higher grade schools, 25 in chawls and 15 in the schools of the municipality.

Three new films were purchased at a cost of Rs. 870 dealing with the "Rat Menace," the "Fly Danger," and "Social Hygiene for Women."

The Association provided exhibits at the request of the National Baby and Health Week Committee in the exhibition which was held in Parel. Selections of posters, diagrams and models from the Museum were lent for the occasion and large numbers of the leaflets published by the Association were distributed for propaganda and instructional purposes. An ingenious and instructive exhibit on food and flies was arranged and set up on behalf of the Association by Dr. Sorab C. Hormusji.

Donations of Rs. 510 and Rs. 332 have been received from Government and the Royal Sanitary Institute, London, respectively. A sum of Rs. 1,000 was voted by the Corporation.

Belgaum, Poona, Nadiad and other Sanitary Associations worked according to the indications of local requirements and opportunities.

### *Health and Baby Week*

73. The Health and Baby Week movement made further progress in the Presidency, celebrations being held in many important towns.

The Assistant Directors of Public Health helped in the work of organization and gave lectures and demonstrations.

In Sind Registration District, Baby Weeks were held at Karachi, Sukkur, Hyderabad and Shahdadpur.

In Karachi, the Baby and Health Week was celebrated under the auspices of the Health Association from 2nd to 7th June 1927. The prize distribution ceremony was performed by Mrs. Hudson. Magic lantern lectures on small-pox, tuberculosis and malaria were delivered and the judging of babies was conducted in various centres of the town. A successful Baby Week organised by the municipality was held in Sukkur from the 25th to 27th March.

In the Western Registration District, Baby Weeks were held at Bhusaval, Jalgaon, Nandurbar, Nasik, Kurla, Bandra, Yawal and Dhulia. The Assistant Director of Public Health attended the Baby Weeks at Nasik and Yawal and at the latter town he delivered a lecture on the importance and advantages of holding Baby Weeks.

The Baby Week was celebrated at Jalgaon from 18th to 22nd February 1927 under the auspices of the East Khandesh Health Association. The opening ceremony was inaugurated by the Collector. Lectures, magic lantern and cinema shows, competition and school activities were arranged. Six hundred and twenty-four babies were presented for competition. Each baby received a toy and about 42 babies were given prizes in the form of gold medals, silver pots and ornaments worth in all about Rs. 477. The District Local Board granted Rs. 300 for prizes. Prizes for Revenue and Police Babies were presented by Civilian officials.

In the Central Registration District, Baby Weeks and Public Health Exhibitions were held at Ahmednagar, Alandi, Pandharpur, Barsi, Rajapur and Dapoli.



On the 15th July 1927, the opening day of the Local Bodies' Conference which was held in the Council Hall in Poona, His Excellency Sir Leslie Wilson, the Governor of Bombay, dwelt in his inaugural address to the conference on the duties of public bodies in the matter of public health and generously referred to the work of the Bombay Presidency Baby and Health Week Association. He exhorted local bodies to support the propaganda and the organization undertaken by the Association.

During the two days on which the Local Bodies' Conference met in the Council Hall an elaborate Public Health and Child-Welfare Exhibition was arranged in the galleries of the Hall and continued for a further four days in the city at the head-quarters of the Poona Seva Sadan Society. It was visited by nearly 500 persons most of whom were the delegates for the conference.

The Public Health Maternity and Infant Welfare Conference held on the 17th July in the Sir Vithaldas Hall of the Poona Seva Sadan Society was a great success. The Hon'ble Diwan Bahadur Harilal D. Desai, Minister-in-charge Education, delivered the opening address and Lieut.-Colonel Anthony presided over it after the Hon'ble Minister had left. Over hundred representatives attended the conference organized by the Association in collaboration with the Public Health Department. Resolutions were passed at the conference and about 500 copies of the same were sent to the Secretary, Local Self-Governing Institute, Poona, for distribution among all Local Bodies.

The Lady Wilson Village Baby Scheme movement of which Dr. da Gama is the Secretary made good progress during the year. The training of village dais was carried on in Poona and Sholapur districts by the local committees. As the working of the Scheme so far was considered to be satisfactory, a meeting was convened on 28th July 1927 at Government House, Poona, with a view to organising it on a permanent basis. An Association was formed and named the Lady Wilson Village Maternity Association.

The Executive Committee met four times. Mr. H. G. Franks of the *Times of India* being co-opted as a member for publicity. The Collectors have been asked to form district committees and to enrol Patrons, Life Members and Members.

District Committees have accordingly been formed at the following places :—

- |                   |                   |
|-------------------|-------------------|
| 1. Poona.         | 6. West Khandesh. |
| 2. Sholapur.      | 7. Kanara.        |
| 3. Bijapur.       | 8. Dharwar.       |
| 4. Thana.         | 9. Kolaba.        |
| 5. East Khandesh. |                   |

A local sub-committee has been formed to carry out the objects of the Association at Matheran. No dais have yet been trained by the West Khandesh, Kanara, Dharwar and Kolaba Committees. Though a committee has not been constituted for Ratnagiri, arrangements for imparting instruction to dais have been made at some of the dispensaries.

An appeal for funds was issued to all the Chiefs of Native States, Sardars and Members of Council and over Rs. 5,000 have been received from this source. Grants of Rs. 1,000 from the Indian Red Cross (Bombay Presidency Branch), Rs. 4,000 from the Infant Welfare Society and Rs. 6,260 from Government have also been received. Total subscription including the above grants amount to Rs. 35,128.

The Government of Bombay have sanctioned an annual grant-in-aid equal to one-third of the expenditure subject to a maximum of Rs. 10,000.

In the Southern Registration District 19 Health and Baby shows were celebrated as compared with 7 in 1926.

The Baby Week at Gadag was declared open by the Collector of Dharwar. Lectures on public health, hygiene and diseases of babies were delivered by the local medical practitioners. A special meeting of ladies was convened at which lady speakers emphasised the striking advantages of such an important movement and impressed on the female audience the necessity for this propaganda work throughout the year.

A stage drama was arranged through the local amateurs of Gadag and tickets were sold to the public. Rs. 1,009 were realised and the municipality donated Rs. 500 more. The total expenditure for exhibiting the show amounted to Rs. 820. The Committee decided to purchase a magic lantern with hygiene and health slides from the funds on hand.

At Bagalkot in Bijapur district the Baby Show was declared open by Rao Bahadur S. T. Kambli, M.L.C., and President of the Hubli Municipality. Mr. Deodhar of the Provincial Baby Week Committee visited Bagalkot on the last day of the show and delivered a lecture in Marathi on the movement which was greatly appreciated.

In Gujerat Registration District, Baby Weeks were celebrated at Ahmedabad, Surat, Prantij, Dhandhuka, Bavla, Sanand, Viramgam and Patri.

At Surat the Surat Sanitary Association took an active part in the proceedings. The Week was celebrated for four days, the total attendance at the lectures and cinema shows being about 5,000 out of which 3,000 were ladies, an auspicious sign. A special lecture and a cinema show were arranged for Golwad locality and about 1,200 people attended it. 300 babies took part 8 of whom received prizes worth in all Rs. 67-15-0. Toys worth Rs. 50 were also distributed.

At Ahmedabad the Baby and Health celebration was undertaken by the Sanitary Association and it lasted from 27th February to 6th March 1927. The opening speech of welcome was read by Sheth Mangaldas



G. Parekh, the President of the Association. It was followed by an inaugural address on the 'Aims and Objects of Baby Week' by Khan Bahadur Dr. Nanavatty, C.I.E. On its conclusion the opening ceremony of the Week was performed by Mrs. Chatfield.

### *Health of Industrial Workers.*

74. The Assistant Directors of Public Health continued their inspection of factories (under the Act of 1911) in the course of their tours submitting copies of their reports to the Managers and the Chief Inspectors of Factories.

The Assistant Director of Public Health, Sind Registration District, visited six factories : two in Nawabshah district and four in Karachi city.

The Assistant Director of Public Health, Gujerat Registration District, inspected three factories during his annual tour in the Panch Mahals district, *viz.*, the Karim Oil and Ginning Factory at Godhra, the Shri Krishna Ginning Factory and the D. R. Vakharia Ginning and Pressing Factory both at Derol. The light and ventilation are fair during the day but for night work more candles than were in use are required for sufficient light. The water for drinking purposes is derived from wells in the compounds and is supplied by means of pipes. Gutters to drain the water away or soak-pits to dispose of waste water should be provided. Latrines are provided in all factories. In the case of the first factory mentioned above, the latrine is used only by the officials of the factory and not by the labourers.

Some patent medicines were in stock and it was reported that outside medical aid was procured in case of need. There was no provision made for First Aid.

The Assistant Director of Public Health, Western Registration District, inspected (1) The Match Factory at Thana, (2) the Shri Dhutpapeshwar Factory at Panwel, (3) the Hydro-electric Power House at Khopoli.

The Match Factory at Thana has been working for a year. The accommodation, light and ventilation is adequate. Conservancy arrangements do not appear to be satisfactory. The whole compound was full of refuse and wood cuttings. An incinerator should be provided for burning this up.

The premises of the Shri Dhutpapeshwar factory were found clean and have been provided with adequate sanitary conveniences for the staff employed. The factory is efficiently managed.

The sanitation of the Hydro-electric Power House labour camp and of the staff quarters is maintained efficiently. The septic tank arrangement for the water closets is working satisfactorily. Cases of minor accidents are occasionally treated in the dispensary. There is not much sickness in this colony.

The Assistant Director of Public Health, Central Registration District, inspected only one factory, *viz.*, the Sholapur Spinning and Weaving Mill at Sholapur during 1927.



No factories were inspected by the Assistant Director of Public Health, Southern Registration District, during the year 1927 as he was in charge of the Vaccine Institute, Belgaum, during the first four months of the year, on tour in Kanara district, where there are no factories, during the latter part of it, and engaged in coping with the cholera epidemic for the remainder.

None of the factories inspected by the Public Health staff had any welfare Scheme for its work people.

### *Personal Proceedings.*

75. The activities of the Officers in charge of the Public Health Laboratories are detailed above (paragraph 70).

The Assistant Directors of Public Health visited 696 towns and villages during the year making reports to the local authorities as usual. Dispensaries, schools, police lines, factories, proposed sites for Government buildings, etc., were inspected ; and courses of lectures in hygiene and public health were delivered to students at the Medical Schools of Poona, Ahmedabad and Hyderabad (Sind) and to the students of the Police Training School at Nasik.

Dr. Jamshyd Munsiff was in charge of the Western Registration District, till 2nd February 1927 after which the charge was held by 3 acting officers the last being Dr. R. K. Mhatre who took over on 4th June 1927 and held it till the end of the year. Complete surveys of 4 towns and 5 village panchayats were made. Four towns were visited for general advice, 27 towns and villages for sanitary purposes and 50 towns and villages for inspection of vaccination.

A Malaria Survey of the Kopri bungalows and an investigation regarding the prevalence of guinea-worm disease in Kolaba district were carried out. He gave opinion on 19 reports of water analysis received from different parts of his division, inspected 10 school sites, 2 police lines, 1 site for a beef market, 3 sites for night-soil depôts and 4 for other purposes. Four dispensaries in his division were also inspected. He delivered 12 lectures and 4 demonstrations on hygiene and sanitation to the students at the Central Police Training School, Nasik. He recommended 5 minor sanitary projects for grant-in-aid to the Sanitary Board, gave opinion on the irrigation channel at Shahada, West Khandesh district, and arranged for the exhibition of the cinema film on leprosy at Dhulia, Bhusaval, Nasik and Bandra.

Dr. Jamshyd Munsiff attended the All India Maternity and Child Welfare Conference held at Delhi in February as a representative of the Bombay Public Health Department.

As Dr. D'Herelle in charge of the Plague and Cholera Bacteriophage Inquiry, Kasauli, wished to investigate the cholera epidemic in a town having about 10,000 population, Bhusaval was selected for the purpose and Dr. D'Herelle after some delay visited that town with his assistant on 5th September 1927 but as no fresh cases of cholera had occurred in the



town, he returned after collecting samples of water from wells in the infected and non-infected areas of the town.

Dr. Mhatre gave evidence before the Indian Cinematograph Committee.

He sent the following exhibits to the Far Eastern Association of Tropical Medicine held at Calcutta in December 1927 :—

(1) A coloured map showing the “ Kunds ” in the Godavari at Nasik, diversion of the “ Aruna Nalla ” and the conduit connecting the intercepting drain with the “ Gao Mukh ” in the Ram Kund.

(2) Photographic enlargements—

(a) Two prints of Godavari river showing flow of water and of the “ Aruna Nalla ” passing through “ Gao Mukh ” into Ram Kund.

(b) Two prints of Kushavarta Tank illustrating the process of chlorination.

Interviews with Heads of Local Bodies, Heads of districts and other Government Officers, the Provincial Secretaries of the National Baby Week, Bombay Presidency, were included among his activities.

Classes for village officials were held by the Inspectors of Sanitation and Vaccination in the Western Registration District during the monsoon as in the year previous. One hundred and twenty classes were held by the Inspectors and out of 9,171 village Officers, 6,522 attended the course.

The Inspectors of Sanitation and Vaccination were required to interview Local Officers and leaders of the public in their charges and send their reports every month.

Dr. A. da Gama, D.P.H., was in charge of the Central Registration District throughout the year. He gave advice to four towns and visited twenty-nine towns and villages for vaccination purposes. The Inspectors of Sanitation and Vaccination made remarks in 22 Sanitary Inspection Books.

He inspected five sites for schools, three for burial grounds, one for a beef market and two for police lines. He visited the Spinning and Weaving Mill at Sholapur and Shirala in connection with the formation of a Leper Clinic. Investigation of a small-pox outbreak was made in Khed and Dehu (Poona district) and a cholera enquiry at Alandi, Wagholi, Talegaon Dhamdhare, Chinchwad and Satara.

He inspected palkhis at Alandi, Akurdi, Saswad, Bhose, Bhendi, Sheogaon and Wakhri and attended the fairs at Pandharpur, Alandi, Jejuri, Shingnapur, Shirala and Chinchwad.

He visited Baramati, Gunavadi and Warje in connection with perennial irrigation and its effect on malaria.

He attended the Baby Week and Health Exhibition at Barsi and the Agricultural Show at Ahmednagar and visited Dhond, Baramati, Bombay and Thana in connection with the Lady Wilson Maternity Association.

He inspected the water-supply at Dhankvdi and Bopodi on behalf of the Military Authorities.

He also attended the All India Maternity and Child-Welfare conference held in Delhi in February 1927 as a representative of the Bombay Public Health Department.

The Inspectors of Sanitation and Vaccination visited 793 villages for vaccination purposes, attended minor fairs, gave advice to the people regarding general sanitation, cleanliness, prevention of epidemic diseases, etc.

Dr. J. L. Pinto, D.P.H., was in charge of the Southern Registration District throughout the year besides holding the additional charge of the Vaccine Institute, Belgaum, from 1st January to 22nd April 1927 when he was relieved by Dr. J. B. Mama, D.P.H.

Advice was rendered on public health matters in the case of 16 towns, 18 were visited for general sanitary purposes, 42 villages for vaccination and 164 for other sanitary purposes. He entered remarks in two Sanitary Inspection Books while the Inspectors of Sanitation and Vaccination wrote remarks in 67.

He inspected 18 sites for burial grounds, 12 sites for schools, 25 sites for village extensions, 4 dispensaries, 2 post-offices regarding checking the quinine stock and sale, and a site for an Infectious Diseases Hospital. He carried on special investigations regarding prevalence of epidemics of dysentery in Kanara and malaria in Khanapur Taluka.

He conferred with the members of the Panchayat Committee at Khanapur and advised them regarding anti-plague measures.

He attended the fairs at Badami, Yamnur, Krishnapur, Someshwar and Nidsosi. He visited Mylar fair in Bellary district in connection with sanitary arrangements on the Bombay side of the Tungabhadra River near Chandapur and organised the sanitary arrangements in co-operation with the Revenue and Police Officials, etc., with a view to avoiding outbreaks of infectious diseases.

He inspected the working of the trench latrines at Bagalkot and pointed out the defects to the Municipal Authorities.

He attended the congress of the Far Eastern Association of Tropical Medicine held in Calcutta in December 1927 as a delegate of the Bombay Public Health Department, and also the meetings of the Belgaum Central Jail with a view to suggesting improvements.

Classes for village officials were held by the Inspectors of Sanitation and Vaccination in the Southern Registration District during 1927. Seventy-seven classes were held, the approximate total attendance at all these classes being 1,500 persons.

Gujarat Registration District was in charge of Dr. K. A. Gandhi, D.P.H., throughout the year.

Advice was rendered on public health matters in the case of 7 towns, 80 towns and villages were visited for general sanitary purposes and



327 for vaccination purposes. The Inspectors of Sanitation and Vaccination wrote remarks in 73 Village Inspection Books.

He inspected 5 dispensaries, 3 rain-gauges, 4 sites for schools, two sites for burial grounds, 4 sites for police lines, one for Leper Home, one for Veterinary Hospital and one for a slaughter-house. He gave opinion on twelve reports of analysis of water.

He attended the fair at Champaner, the "Manekthari Punem" fair at Dakore, the quarterly Jail meetings at Sabarmati, the Baby Week celebration at Ahmedabad and delivered a lecture on "Care of Mother and Baby."

In 16 villages recommendations were made to the local authorities concerned and remarks were made in the Sanitary Inspection Books urging the necessity for assigning separate plots for the storage of manure or the removal of the same from the surroundings of sources of drinking water-supply.

In all villages visited, the Birth and Death registers were scrutinised, checked and remarks entered in the Epidemic Registers of small-pox, plague, cholera and influenza. Vaccination registers where available were also inspected and signed.

Dr. R. V. Shiveshwarkar, D.P.H., held charge of the Sind Registration District throughout the year. He inspected the sanitary condition of 21 towns and villages and visited 22 towns and villages for other sanitary purposes and 235 villages for vaccination.

He inspected 21 schools, 15 dispensaries, 6 factories, 3 police lines and gave opinion on 53 water analysis reports.

He visited Sukkur and Larkana in company with the Director of Public Health in connection with the malaria survey and met Lieut.-Colonel McCombie Young of the Indian Research Fund Association and supplied him with information likely to be of help to him in his work.

He investigated the cause of high mortality in Shikarpur.

He visited Sukkur at the instance of the Collector in connection with the outbreak of cholera and advised the municipality to adopt preventive measures against it, and also Tando Adam to select the site for the alternative settling tanks.

He attended the court at Hyderabad to give evidence on public health points in connection with a case filed by Messrs. David Sassoon Bone Crushing Factory against the Hyderabad Municipality.

He conducted a class of Hygiene every Monday under the auspices of the Theosophical Society at Karachi. He visited Karachi Jail and attended its meetings. He served on the Committee formed to celebrate the Baby Week at Karachi.

He visited the Leper Asylum at Mangho Pir and also Mirpurkhas town with a view to seeing the flood affected areas and discussed preventive measures against malaria in the neighbourhood of railway limits with the Principal Medical Officer, Jodhpur Railway and delivered

lectures on "Vaccination and Malaria" to Municipal Councillors. He also delivered a lecture on "Malaria" in the Civil Hospital, Karachi, to the Members of the Medical Union.

He published two articles in local papers one on "How to abate the Mosquito nuisance" and the other on "The House Fly-how it should be eradicated." He attended the malaria class at Saharanpur from September 17th to October 21st.

The Inspectors of Sanitation and Vaccination inspected 27 villages. Out of 2,448 school children examined by the Inspectors 280 were found with enlarged spleen.

The services of Inspectors of Sanitation and Vaccination were utilized for free distribution of quinine in malarious tracts.

Lists of omissions in Birth and Death registers for 1,035 births not recorded by the Tapedars were received from the vaccinators. These lists were forwarded to the Collectors for necessary action. The Tapedars at fault were warned and the entries were ordered to be made in the Birth and Death registers.

The office of the Director of Public Health for the Government of Bombay was held by Lieut.-Colonel H. M. H. Melhuish, D.S.O., I.M.S., upto 11th February 1927 when Dr. Jamshyd Munsiff, M.R.C.P., F.R.C.S., D.P.H., took over charge and acted for him for the remaining part of the year. Forty-one towns and villages were visited in connection with water-supply, drainage and general sanitation.

He visited Sukkur and Larkana and discussed personally the question of Malaria Survey in Sukkur and Larkana with the representatives of Local Bodies in respect of financial help.

He visited the Water-Works at Sukkur, Hyderabad, Karachi, Surat, Ahmedabad and Mahableshtar and made suggestions as to their improvements. He visited the flood affected areas in Gujerat and submitted a report to Government in connection with the measures to be adopted.

He inspected the arrangements made for the fairs at Pandharpur, Alandi, Jejuri, Dakore and Shukaltirth.

He was a member of the Executive Committee organised for the Baby Week, Bombay Presidency, Bombay, and attended their meetings in Bombay. He also attended the Leprosy Committee's meetings. He was the Secretary of the Committee formed to welcome the members of the Interchange of Public Health Personnel arranged under the auspices of the League of Nations and to conduct them to places of interest in the Presidency which included the Vaccine Institute and the Central Jail in Belgaum, the Public Health Laboratory, the Government Dairy, the Central Prison and the Mental Hospital in Poona, the Matunga Leper Asylum, the Haffkine Institute, David Sassoon Mills, the Vehar Lake and the Development Directorate in Bombay.

He was an *ex-officio* member of the Malaria Advisory Committee, Bombay City, and attended its meetings.



He attended the congress of the Far Eastern Association of Tropical Medicine held in Calcutta in December 1927 as a delegate of the Bombay Public Health Department and read a paper on "Sanitary Management of the Principal Pilgrim Centres in the Bombay Presidency."

He attended the Public Health Exhibition at Poona and delivered lectures on "Need for Public Health Propaganda" and "Need for strengthening Public Health Staff." He delivered an address to the Byramjee Jeejeebhoy Medical School, Poona, at their Social Gathering and distributed prizes to successful students.

Poona, 5th September 1928.

H. MELHUIISH, D.P.H.,  
Lieut.-Colonel, I.M.S.,  
Director of Public Health.

## APPENDIX I (a)

### ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT OF BOMBAY FOR THE YEAR ENDING 31ST DECEMBER 1927

#### I.—*Summary*

The following summary shows the inspection and disinfection work done in the Port of Bombay in connection with out-going and in-coming vessels as well as those lying in the harbour and docks during the year ending 31st December 1927.

Seven hundred and thirty-four vessels of all classes with 1,78,593 crew and passengers were examined during the year.

The clothing and bedding and other articles of 79,369 members of crews and passengers of out-going and in-coming vessels and of members of crews of vessels lying in the port were disinfected. Of these 50,572 were Asiatic and African members of crews, third class or deck European and Indian passengers, 31,213 were pilgrims who left the Port of Bombay for ports out of India, 7,584 were members of crews and passengers who arrived by vessels on which cases of infectious diseases had occurred during the voyage or while in the port. In addition to the above-mentioned numbers, 2,847 baggage coolies and some stevedores men were inspected in order to enable certain vessels to work cargo for a few hours after medical inspection and disinfection of their crews and passengers.

#### II.—*Out-going Vessels*

2. In accordance with Government Notification, General Department, No. 1 13, dated the 15th March 1917, the medical examination of all vessels, crews and passengers, proceeding to ports out of India and the disinfection of the clothing and bedding of all Asiatic and African members of crews, of all passengers travelling third class who were not provided with cabin accommodation, of fourth class and deck passengers and of all Asiatic and African servants who sailed on such vessels, were carried out before they left the Port of Bombay.

3. Five hundred and ninety-four outward bound vessels with 65,884 crew and 66,736 passengers, or a total of 1,32,620 persons exclusive of troops who were examined by the Military Embarkation Staff, were inspected as against 562 vessels with 63,813 crew and 56,180 passengers or a total of 1,19,993 persons, during the preceding year.

4. The bedding, boxes and suspected articles of clothing, etc., of 33,903 Asiatic and African members of crews, of 16,669 third class, fourth class and deck passengers and of 21,213



pilgrims who sailed on steamers bound for ports out of India, were disinfected.

5. Ten vessels had cases of cholera, small-pox, measles, chicken-pox, influenza and cerebro spinal fever among their crews and passengers within twelve days prior to their departure from this port. The Bills of Health granted to these vessels mentioned the diseases which had occurred on board as well as the measures which had been taken before their departure for the prevention of the spread of infection on board or its introduction at other ports.

### III.—*Infectious Diseases on Vessels Arriving and Departing and in the Harbour and Docks*

6. In accordance with the rules prescribed under Government Notification, No. 1713, dated the 15th March 1917, medical inspection and disinfection of vessels which were actually infected or suspected of being infected were carried out. All Pilgrim Ships and all vessels which arrived from East African Ports between the limits of Durban and Port Sudan were also inspected on arrival.

7. One hundred and twenty-eight in-coming vessels with crews aggregating 14,288 persons and 31,475 passengers and pilgrims, were inspected during the year. Of these 128 vessels, 20 (including Hired Transports) were found to have had cases of infectious diseases on board at the time of arrival or during the voyage. In connection with these vessels there were 8 cases of small-pox, 4 of measles, 5 of chicken-pox, 1 of jigger, 1 of influenza, 9 of pneumonia, 1 of cerebro spinal fever, 1 of mumps and 1 of leprosy. The cases which occurred on Hired Transports were dealt with by the Military Authorities on landing in Bombay and those among the crews and passengers of other vessels by the Port Health Officer. The cases enumerated above, as having occurred among the troops were removed to the Military Hospitals on shore for treatment, while those among the European crews and passengers were removed to the St. George's Hospital and those among the Asiatic and African members of crews and passengers to the Jamsetjee Jeejeebhoy, Goculdas Tejpal, Arthur Road, and Maratha Hospitals. The ships and the clothing and bedding of their crews were disinfected.

8. Three cases of small-pox, one case of chicken-pox, and one case of measles were reported to have occurred on vessels after their departure from this port. Three cases of small-pox one of measles and one case of chicken-pox were reported to have been landed at Aden and Mombassa.

9. Tabular Statement No. 1 gives the number of cases of infectious diseases which occurred on vessels arriving at or departing from the Port of Bombay or lying in the harbour or docks.

10. Tabular Statement No. 2 gives separately the details of infectious diseases on vessels in the harbour or docks. The

clothing and bedding of the crews of those vessels aggregating 210 persons were disinfected.

#### IV.—*Disinfection and Fumigation of Ships*

11. During the year under report 60 vessels were disinfected or fumigated.

12. Of the 60 vessels referred to in the foregoing paragraph, 27 vessels were fumigated by means of the Clayton process. Of this number, 23 were outward bound pilgrim vessels, proceeding to Jeddah, and 4 were fumigated at the request of the owners. In addition to these vessels the British India Steam Navigation Company fumigated 20 steamers by their own apparatus and by the Port Clayton Apparatus which was occasionally lent to them at their request for the purpose.

13. The Port Disinfection Station received every Monday clothing and bedding from various hospitals for disinfection. 735 Bundles containing clothing and bedding of this kind were disinfected, as against 1,072 bundles during the preceding year.

#### V.—*General Health of Shipping*

14. During the year under report 1,209 persons connected with the shipping were admitted into the various hospitals in the city. St. George's Hospital admitted 245 European patients of whom 11 died and 224 were discharged cured. The Jamsetjee Jeejeebhoy Hospital admitted 299 Asiatic patients of whom 38 died, and 235 were discharged cured. The Goculdas Tejpal Hospital admitted 619 Asiatics of whom 15 died, and 545 were discharged cured. The Arthur Road and Maratha Hospitals admitted 46 patients, of whom 11 died, and 35 were discharged cured.

15. There were no deaths from mephitic gas poisoning while cleansing bilges of ships during the year. There were 512 accidents on board of vessels which were lying in the harbour and docks. Of these 23 proved fatal.

#### VI.—*Red Sea Pilgrim Traffic*

##### (a)—*Outward Pilgrim Traffic*

16. In accordance with the orders of the Government of India in force, the Outward Pilgrim Traffic of the year under report began on the 25th January 1927. Before the pilgrims embarked at Bombay the ships were thoroughly cleansed and freed from rats by means of the Clayton process.

The pilgrims were medically inspected and their clothing and bedding disinfected before they were allowed to embark.



17. The names of ships, the number of pilgrims carried by them and the dates on which they left Bombay for Jeddah are given below :—

No.	Name of vessel	Number of pilgrims sailed	Date of departure, 1927
1	S. S. "Khosrou" ...	843	25th January.
2	S. S. "Jehangir" ...	815	17th February.
3	S. S. "Sultan a" ...	910	26th "
4	S. S. "Tangistan" ...	767	8th March.
5	S. S. "Alavi" ...	428	17th "
6	S. S. "Zayni" ...	464	23rd "
7	S. S. "Akbar" ...	727	29th "
8	S. S. "Jehangir" ...	616	6th April.
9	S. S. "Sultania" ...	668	9th "
10	S. S. "Tangistan" ...	531	12th "
11	S. S. "Gorgistan" ...	936	17th "
12	S. S. "Alavi" ...	1,170	18th "
13	S. S. "Zayni" ...	977	25th "
14	S. S. "Dara" ...	1,434	26th "
15	S. S. "Shuja" ...	1,435	8th May.
16	S. S. "Jehangir" ...	1,159	9th "
17	S. S. "Sultania" ...	1,527	10th "
18	S. S. "Alavi" ...	1,172	12th "
19	S. S. "Tangistan" ...	930	13th "
20	S. S. "Gorgistan" ...	933	15th "
21	S. S. "Homayun" ...	950	16th "
22	S. S. "Khosrou" ...	1,521	17th "
23	S. S. "Dara" ...	300	18th "
Total ...		21,213	

18. Nineteen thousand four hundred and sixty-six intending pilgrims were vaccinated before starting by a special vaccinating staff placed at the disposal of the Police Commissioner by the Municipality. 2,894 pilgrims were inoculated for cholera.

19. Forty-four deaths occurred at sea among pilgrims on outgoing ships. They were chiefly due to senile debility, pneumonia, Jaundice, asthma, diarrhoea, malaria, encephalitis lethargica, cardiac failure, and heat stroke.

#### (b)—Inward Pilgrim Traffic

20. During the year under report 15,503 pilgrims arrived from Jeddah in 21 vessels as tabulated in statement No. 3 which is appended to this report.

21. Two hundred and twenty-four deaths occurred among the pilgrims during the return voyage. They were due to small-pox, cardiac failure, general debility, senile debility, malaria, dysentery, tuberculosis, pneumonia, sunstroke, apoplexy, anæmia, diarrhoea, starvation, chronic bronchitis, chronic nephritis, enteritis, acute Bright's disease and hyperpyrexia.

VII.—*Sanitary state of the Harbour and the Foreshore*

22. The sanitary state of the harbour and the various Bunders and Docks was fair.

VIII.—*Cholera, small-pox, plague, Acute pneumonia and Influenza in the City of Bombay*

23. During the year under report 82 deaths from cholera, 842 deaths from small-pox, 207 deaths from plague, 7,501 deaths from acute pneumonia, and 79 deaths from influenza occurred in the City of Bombay during the year 1927 as against 5 deaths from cholera, 480 deaths from small-pox, 56 deaths from plague, 8,584 deaths from acute pneumonia and 93 deaths from influenza, during the preceding year.

IX.—*General*

24. The undersigned was in charge of the Port Health Department throughout the year under report.

25. The members of the Medical, Clerical, and Sanitary Police Staffs performed their duties satisfactorily.

W. M. HOUSTON,

Bombay Port Health Office,  
New Custom House,  
Dated 29th February 1928.

M.B., D.P.H.,  
Lieut-Colonel, I.M.S.,  
Health Officer of the Port.



TABLE No. 1

*Statement showing the summary of the shipping of the Bombay Port and work done in connection therewith for the year ending 31st December 1927*

Vessels including Country Craft	No. of Vessels inspected	No. of persons inspected	No. of Asiatic and African crew and 3rd Class or Deck passengers disinfected	No. of Vessels		No. of persons vaccinated for small-pox and inoculated for cholera	
				Disinfected	Fumigated	Vaccinated	Inoculated
Entered ... ..	128	45,763	7,374	20	...	...	...
Left ... ..	594	132,620	71,785	1	23	19,466	2,894
In Harbour during the year ...	12	210	210	12	4	...	...
Total ...	734	178,593	79,369	33	27	19,466	2,894
Total for 1926 ...	683	145,520	62,929	26	23	12,902	...

Vessels Craft including Country	Diseases and cases of each										
	Plague	Cholera	Small-pox	Measles	Chicken-pox	Jigger	Influenza	Acute Pneu-	Leproc	Mumps	Cerebro-Spinal Fever
Entered ... ..	...	...	8*	4	5	1	1	9	1†	1	1
Left ... ..	...	3	3†	2†	1†	...	...	...	...	...	...
In Harbour, during the year ...	...	...	4	2	5	...	...	...	...	1	...
Total ...	...	3	15	8	11	1	1	9	1	2	1
Total for 1926 ...	...	...	12	41	8	...	3	2	3	10	3

\* This number includes seven cases of small-pox, which occurred on five vessels returning with pilgrims from Jeddah.

† These cases were reported to have been landed at intermediate ports after their departure from Bombay.

‡ Indian.

TABLE NO. 2

*Statement showing the number of steamships, square-rigged vessels and Indian craft which became infected while lying in the Port of Bombay during the year 1927*

Months	No. of persons who were infected with infectious disease in Docks and Bunders			Total number of infected vessels.	Total No. of infectious diseases in the Bombay Harbour.								No. of crew disinfected
	Plague	Cholera	Influenza		Plague	Cholera	Small-pox	Measles	Chicken-pox	Scarletina	Mumps	Leprosy	
January	...	...	...	...	...	...	...	...	...	...	...	...	...
February	...	...	...	1	...	...	1	...	...	...	...	...	17
March	...	...	...	...	...	...	...	...	...	...	...	...	...
April	...	...	...	4	...	...	...	...	4	...	...	...	...
May	...	...	...	1	...	...	1	...	...	...	...	...	7
June	...	...	...	2	...	...	1	1	...	...	...	...	70
July	...	...	...	2	...	...	1	1	...	...	...	...	...
August	...	...	...	1	...	...	...	...	1	...	...	...	58
September	...	...	...	1	...	...	...	...	...	...	1	...	58
October	...	...	...	...	...	...	...	...	...	...	...	...	...
November	...	...	...	...	...	...	...	...	...	...	...	...	...
December	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>Total</b>	...	...	...	12	...	...	4	2	5	...	1	...	210
<b>Total for 1926</b>	...	...	...	9	...	...	6	4	2	...	9	1	182



TABLE No. 3

*Statement showing the number of pilgrims who arrived in Bombay from Jeddah by Vessels during the year 1927*

No.	Name of Ship	Date of arrival 1927	Num- ber of crew inspec- ted	Num- ber of pil- grims inspec- ted	Num- ber of deaths during the voyage	Number of cases of infectious diseases on Board		Re- marks
						On arrival	During voyage	
1	S.S. "Dara"	27th June	104	1,406	12	...	2	
2	"Sarvatan"	28th "	98	1,589	27	2	...	
3	"Takada"	" "	152	1,327	11	...	...	
4	"Zayani"	1st July	94	966	11	1	...	
5	"Akbar"	" "	89	1,496	28	1	...	
6	"Khosrou"	23rd "	96	1,505	12	1	...	
7	"Alavi"	24th "	94	167	14	...	...	
8	"Sultania"	26th "	101	1,516	13	...	...	
9	"Intaba"	3rd August	84	1,294	22	...	...	
10	"Shuja"	6th "	97	518	9	...	...	
11	"Dara"	8th "	106	525	11	...	...	
12	"Akbar"	9th "	96	454	7	...	...	
13	"Sultania"	31st "	98	452	18	...	...	
14	"Jehangir"	2nd September	95	349	8	...	...	
15	"Alavi"	9th "	96	460	5	...	...	
16	"Zayani"	16th "	89	369	1	...	...	
17	"Intaba"	" "	89	443	5	...	...	
18	"Jehangir"	23rd "	97	337	10	...	...	
19	"Alavi"	21st October	86	165	...	...	...	
20	"Jehangir"	14th November	80	153	...	...	...	
21	"Jehangir"	24th December	83	12	...	...	...	
Total			2,024	15,503	224	5	2	

## APPENDIX I (b)

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT,  
KARACHI, FOR THE YEAR ENDING 31ST DECEMBER 1927I.—*Outgoing Vessels*

Three hundred and seventy-four steamers outward bound for Ports beyond India were medically inspected and granted Bills of Health during the year under report.

Of this number 190 steamers were proceeding to Aden, the Red Sea Ports and Europe, and 184 to other Ports out of India including the Persian Gulf.

In addition to the above, 16 pilgrim ships from Jeddah bound for Bombay made a passing call at Karachi to land pilgrims booked for this Port. The Bills of Health of these ships were endorsed and pratiques were granted to them after medical inspection of their passengers and crews.

Three hundred and twenty-five country crafts sailing for Ports beyond India were also granted Bills of Health after medical inspection.

In accordance with the Port Health Regulations in force, the Asiatic and African crews, deck and third class passengers, of all steamers and country crafts proceeding to Ports out of India were medically inspected and their clothing, bedding and other articles disinfected at the Port Health Disinfecting Station, Keamari, prior to their departure from the Port of Karachi.

II.—*Incoming Vessels*

During the year under report 60 steamers arrived in the Harbour in quarantine, these ships were medically inspected on their arrival and pratiques were granted to them.

Of these 60 steamers, 25 arrived from East African Ports, 16 Pilgrim Ships from Jeddah *viâ* Aden and the remaining 18 from various other Ports.

Five country crafts arrived here in quarantine from East African Ports they were also medically inspected on their arrival and pratiques were granted to them.

III.—*Synopsis of Inspection and Disinfection performed during the year under report*

The following tabular statement shows the number of vessels, crews and passengers inspected:—

	Vessels			Crews and Passengers		
	Steamers	Country boats	Total	Of Steamers	Of country boats	Total
Incoming ...	60	5	65	28,849	65	28,914
Outgoing ...	374	325	699	77,759	3,815	81,574
Total ...						110,488



Of these 110,488 persons (crews and passengers) who were medically inspected on their arrival at, or departure from, the Port of Karachi 54,036 persons (crews and passengers) also had their clothing, bedding and other articles disinfected.

#### IV.—*Miscellaneous Disinfection*

On some occasions during the year, clothing, bedding, etc., which were sent for disinfection from the Customs Department and private individuals were duly disinfected by steam in the "Equifex Steam Disinfectors."

#### V.—*Plague*

No case of this disease occurred on incoming or outgoing vessels during the year under report.

#### VI.—*Cholera*

No case of this disease occurred during the year under report on either incoming or outgoing vessels.

#### VII.—*Small-pox*

During the year under report 7 cases of small-pox were removed from the below mentioned steamers to the Epidemic Diseases Hospital, Karachi, for treatment:—

(a) One saloon boy, from the S.S. "Chybessa" on 31st March 1927.

(b) One Asiatic fireman, from the S.S. "Koudekerk" on 3rd June 1927.

(c) One Asiatic Deck Topaz, from the S.S. "City of London" on 10th April 1927.

(d) One second class female pilgrim from the incoming Pilgrim Ship "Jehangir," on 14th July 1927 (this patient was convalescing from small-pox).

(e) One deck pilgrim from the incoming pilgrim Ship "Shuja," on 4th August 1927.

(f) Two cases of small-pox from the Persian Gulf Mail Steamer "Varsova" which arrived from Basrah (and was onward bound for Bombay) on the 6th April 1927, one was Civil deck passenger and the other was a Military deck passenger.

The following is a brief account of the abovementioned cases:—

(a), (b), (c). On the S.S. "Chybessa," S.S. "Koudekerk" and the S.S. "City of London," the patients developed signs and symptoms of small-pox while the vessels were in the Karachi Harbour. All these vessels had arrived here from Bombay and most probably the patients were in incubation stage when the vessels left Bombay and they developed signs and symptoms of the disease a few days after arriving at Karachi. Precautionary measures were carried out on all these vessels such as disinfection of the crews' quarters, infected parts of the vessels and thorough disinfection by steam under pressure of the entire clothing, bedding, etc., of the crews. Vaccination was offered and those who availed of it were vaccinated or re-vaccinated as the case may be.



The S.S. "Chybessa" sailed hence for Colombo on 6th April 1927 and the S.S. "Koudekerk" sailed hence for Europe on 4th June 1927. The Bills of Health of both these vessels were duly endorsed as to the precautionary measures carried out on these vessels at this Port.

The S.S. "City of London" sailed hence for the United Kingdom *via* Bombay on the 11th April 1927 and her Bill of Health was also endorsed but in addition to this a telegram was sent to the Health Officer of the Port, Bombay, as she was to call at Bombay.

(d) In the case of pilgrim Ship "Jehangir," the second class female pilgrim in question was convalescing from small-pox. The patient was sent to the Epidemic Diseases Hospital, Karachi, for a further period of isolation, together with her husband until she was completely free from infection. The kit of the patient and of the immediate contacts was disinfected by steam under pressure, at the Port Health Disinfecting Station, and the immediate contacts were also re-vaccinated. The infected parts of the ship were also disinfected. After discharging the Karachi Pilgrims, the ship sailed hence for Bombay on the same day and no further cases of small-pox occurred on board. A telegram was sent to the Health Officer of the Port of Bombay informing him of the landing of this convalescing small-pox pilgrim at Karachi.

(e) In the case of Pilgrim Ship "Shuja" the person suffering from small-pox was a deck pilgrim. It was a well developed case of small-pox. The patient was landed and sent to the Epidemic Diseases Hospital, Karachi, for treatment. Bedding, clothing, etc., of the patient and the immediate contacts were disinfected at the Port Health Disinfecting Station by steam under pressure and infected parts of the ship disinfected. The immediate contacts were vaccinated. The ship sailed hence for Bombay with onward bound pilgrims after discharging the Karachi pilgrims and no further cases of small-pox occurred on board. A telegram was sent to the Health Officer of the Port, Bombay, notifying the case of small-pox landed at Karachi.

(f) The Mail Steamer S.S. "Varsova" from Basrah onward bound for Bombay arrived here with two cases of small-pox, on board (one civil and military deck passenger). Both the patients were landed at Karachi and sent to the Epidemic Diseases Hospital, for treatment. Disinfection of the bedding, clothing, etc., of the entire deck passengers and Asiatic crew was carried out at this Port and "Free Pratique" was granted to the vessel at this Port so as not to cause delay to the Royal Mail at Bombay. Those who were willing were also vaccinated. The ship sailed hence for Bombay on the same day and no further cases occurred on board. A telegram was sent to the Health Officer of the Port, Bombay, notifying to him the cases of small-pox landed at this Port.

S.S. "Baroda" on arrival from the Persian Gulf on 21st November 1927 reported that an Indian Saloon passenger, who had embarked on board at Bahrein on 16th November 1927, was found to be suffering from small-pox immediately after the ship had sailed from that Port. The patient was landed at Bandar Abbas on 18th



November 1927 for treatment. On the arrival of the ship at this Port, all the passengers were carefully examined and no further cases were detected. Infected parts of the vessel (the cabin occupied by the passenger, etc.) were thoroughly disinfected and so also the bedding, etc., of the contacts, vaccination was offered but was not availed of by the contacts. The ship sailed hence for Bombay and no further cases occurred on board. A telegram was sent to the Health Officer of the Port, Bombay, informing him of the incident.

At the time of disinfection and medical inspection at the Port Health Disinfecting Station of deck passengers booked for the unmentioned 3 steamers, following cases of small-pox were detected and they were accordingly not allowed to embark:—

- (1) S.S. "Barala" on 8th May 1927, a male child.
- (2) S.S. "Bankura" on 3rd July 1927, a male child.
- (3) S.S. "Barjora" on 8th September 1927, a male adult.

#### VIII.—*Chicken-pox*

No cases of this disease occurred on incoming or outgoing vessels during the year under report.

#### IX.—*Measles*

One case amongst the Asiatic saloon crew of S.S. "Chindwara" was removed to the Epidemic Diseases Hospital on 7th February 1927, necessary precautions were carried out, *i.e.*, disinfection of bedding, clothing, etc., of the Asiatic crew, at the Port Health Disinfecting Station; and infected parts of the ship and crew's quarters were thoroughly washed down with disinfecting fluid.

The Mail Steamer "Varsova" from Persian Gulf onward bound for Bombay, called at Karachi on 24th November 1927 and reported one case of measles amongst the second saloon passengers in transit for Bombay. The patient was a male European child. As soon as the child was discovered to be suffering from measles, he was isolated in a cabin with his parents by the ship's Surgeon. As the patient was onward bound for Bombay, he was allowed to proceed to this destination. Telegraphic information was sent to the Health Officer of the Port, Bombay, regarding this case.

During the medical inspection and disinfection at the Port Health Disinfecting Station on 22nd May 1927 of the deck passengers booked for S.S. "Barpeta" a female child was found to be suffering from measles. The child and her parents were not allowed to sail.

#### X.—*Mumps*

Three cases of mumps occurred during the year under report.

H.T. "City of Marseilles" arrived here from Southampton on 26th February 1927 and reported two cases of mumps amongst "troop families," they were convalescent and were taken charge of by the Military Authorities.

H.M.S. "Crocus" on 5th July 1927 while in Karachi Harbour reported one case of mumps amongst officers. The patient was

removed to hospital. At the request of the Commander and the Surgeon of the ship, all bedding, linen, etc., was disinfected at the Port Health Disinfection Station by means of steam under pressure and also the whole ship was fumigated.

XI.—*Yellow Fever, Jigger, Sleeping-Sickness, Scarlet-Fever, Acute-Pneumonia, Cerebro-Spinal Meningitis and Influenza*

No cases of these diseases were detected during the year.

XII.—*Non-Notifiable Diseases*

No cases were sent to Civil Hospital, Karachi, for treatment.

XIII.—*Deaths from Non-Notifiable Diseases*

Eleven deaths from various non-notifiable diseases were reported, as having occurred on board the steamers either in Karachi Harbour or during the voyage to Karachi during the year under report.

XIV.—*Red Sea Pilgrim Traffic*

A.—OUTWARD PILGRIM TRAFFIC

Outward pilgrim season during the year under report commenced on 28th January 1927. *Fifteen steamers carrying 12,931 pilgrims (as against 16 steamers and 8,954 pilgrims during the preceding year) sailed from this Port.*

Immediately before their embarkation, the pilgrims were medically inspected and their clothing, bedding, etc., disinfected at the Port Health Disinfecting Station, Keamari.

The names of the steamers, the number of pilgrims carried by them and the dates on which they sailed from Karachi to Jeddah are given below in tabular form :—

Name of ship	Date of sailing	Number of pilgrims embarked at Karachi
S.S. "Khosrou" ...	28th January 1927 ...	413
S.S. "Jehangir" ...	21st February 1927 ...	358
S.S. "Sultania" ...	1st March 1927 ...	622
S.S. "Tangistan" ...	11th March 1927 ...	180
S.S. "Alavi" ...	21st March 1927 ...	744
S.S. "Zayani" ...	26th March 1927 ...	514
S.S. "Akbar" ...	1st April 1927 ..	806
S.S. "Jehangir" ...	10th April 1927 ...	552
S.S. "Sultania" ...	12th April 1927 ...	855
S.S. "Tangistan" ...	16th April 1927 ...	408
S.S. "Khosrou"* ...	18th April 1927 ...	1,511
S.S. "Akbar"* ...	28th April 1927 ...	1,503
S.S. "Zayani"* ...	21st May 1927 ...	1,171
S.S. "Dara" ...	22nd May 1927 ...	1,370
S.S. "Sarvistan"* ...	23rd May 1927 ...	1,924
Total ...		12,931



Out of the above named 15 steamers, 4 steamers, S.S. "Khosrou,"\* S.S. "Akbar,"\* S.S. "Zayani"\* and S.S. "Sarvistan"\* were thoroughly cleansed and freed from rats by means of the Clayton process at this Port, as these steamers started their voyage from Karachi with pilgrims.

The S.S. "Khosrou," which arrived at Karachi from Bombay with pilgrims on 27th January 1927 reported death of one male pilgrim during the voyage from Bombay to Karachi. The cause of the death was certified to be general debility by the ship's Surgeon.

Pilgrim Ship "Jehangir," which arrived from Bombay on the 19th February 1927 reported death of one male Bombay pilgrim, aged 90 years, the death was due to senile debility and heart failure, the body of the deceased was buried on shore by the pilgrim department.

During the year under report one case of small-pox was detected among the pilgrims at the time of the medical inspection held at the Port Health Disinfecting Station, Keamari, prior to their embarkation, the patient was sent to the Epidemic Diseases Hospital, Karachi, for treatment.

#### B.--INWARD PILGRIM TRAFFIC

The following table shows the number of pilgrims who returned to Karachi from Jeddah, the names of ships by which they travelled and other particulars :--

No.	Names of steamers	Date of arrival	No. of crew	Number of pilgrims for Karachi	Number of deaths during voyage or in Harbour	Number of cases of infectious disease during voyage or on arrival
1	S.S. "Shuja "	... 26th June 1927 ...	98	1,413	2	Nil
2	S.S. "Alavi "	... 27th June 1927 ...	96	1,130	11	Nil
3	S.S. "Sultania "	... 28th June 1927 ...	109	1,514	13	Nil
4	S.S. "Khosrou "	... 29th June 1927 ...	92	1,518	9	Nil
5	S.S. "Homayun "	... 1st July 1927 ...	94	942	10	Nil
6	S.S. "Jehangir "	... 14th July 1927 ...	97	1,152	13	One case convalescent from small-pox.
7	S.S. "Alavi "	... 20th July 1927 ...	94	989	14	Nil
8	S.S. "Shuja "	... 4th August 1927...	97	910	8	One case small-pox.
9	S.S. "Dara "	... 5th August 1927...	106	904	11	Nil
10	S.S. "Zayani "	... 6th August 1927...	90	979	25	Nil
11	S.S. "Akbar "	... 6th August 1927...	96	1,055	7	Nil
12	S.S. "Sultania "	... 27th August 1927...	98	1,130	18	Nil
13	S.S. "Jehangir "	... 30th August 1927...	96	812	8	Nil
14	S.S. "Alavi "	... 6th September 1927.	96	725	5	Nil
15	S.S. "Intaba "	... 12th September 1927.	89	578	4	Nil
16	S.S. "Jehangir "	... 25th September 1927.	96	448	7	Nil
Total ...			1,544	16,199	165	Two

*In all 16,199 pilgrims returned to Karachi during the pilgrim season of 1927, whereas the number of pilgrims who returned to Karachi during the previous Haj Season of 1926 was 12,805.*

One hundred and sixty-five deaths as shown in the tabular Form B occurred on the returning pilgrim ships. Deaths were due mostly to general debility, inanition and diarrhœa. Seventy-one pilgrims were in ship's hospital on arrival at Karachi, *i.e.*, 3 on Shuja, 3 on Alavi, 4 on Sultania, 5 on Khosrou, 4 on Jehangir, 2 on Alavi, 8 on Shuja, 3 on Dara, 4 on Zayani, 15 on Akbar, 6 on Sultania, 3 on Jehangir, 1 on Alavi, 7 on Intaba and 3 on Jehangir suffering from general debility, diarrhœa and inanition. Out of these seventy-one pilgrims 16 were sent to the Civil Hospital, Karachi, for treatment, while the rest declined to go to hospital.

#### XV.—*Clayton Apparatus*

Four steamers were fumigated during the year under report.

#### XVI.—*Sanitary State of Harbour*

The sanitary state of harbour was satisfactory.

#### XVII.—*Plague, Cholera, Small-pox, Measles, Chicken-pox, Influenza, and Acute-pneumonia in the City of Karachi*

During the year under report there occurred *no deaths from plague and cholera*, 4 from small-pox, *nil* from chicken-pox, 37 from measles, 8 from influenza and 995 from Acute-pneumonia in the Port and City of Karachi.

#### *Staff*

I regret very much to record the sad demise of Mr. Mahomed Jaffer Sheik Ebrahim on 30th August 1927. The late Mr. Mahomed Jaffer joined this office in 1900 and ever since, he performed the combined duties of clerk, accountant and typist single handed with great energy and zeal. His eagerness and enthusiasm for work enabled him to cope with the ever increasing work of this office. The late Mr. Mahomed Jaffer served for 27 years without enjoying a day's privilege leave. The only privilege leave that he took was from 16th May 1927 on account of his sudden and serious illness, to which he succumbed on 30th August 1927. The late Mr. Mahomed Jaffer was held in high esteem by my predecessors and I also shared their opinion. By his death this office has lost one of its oldest, faithful and hard working servants.

During the period of absence on leave of the late Mr. Mahomed Jaffer, the services of Mr. Parmanand Sukhramdas were kindly lent to this department temporarily by the Collector of Customs, Karachi. Mr. Partabrai D. Advani was transferred to this office from Hyderabad Medical School by the Surgeon-General, to fill in the vacancy caused by the demise of Mr. Mahomed Jaffer.



Mr. Partabrai took over charge as clerk of this office on 28th November 1927 afternoon and relieved Mr. Parmanand who reverted to his substantive appointment in the Customs Department.

The Medical and Clerical staff, the Steam Launch and Clayton establishments and the menial staff performed their duties to my entire satisfaction during the year under report.

B. F. KHAMBATTA,

M.B., B.S., D.P.H.,

Health Officer of the Port, Karachi.

Port Health Office, Kiamari,  
Karachi, dated 5th March 1927.

## APPENDIX I (c)

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT OF ADEN  
FOR THE YEAR 1927I.—*General Remarks*

One thousand six hundred and sixty-five vessels and rigged vessels were granted Bills of Health during the year against one thousand four hundred and eighty-two for the year 1926.

Of the above number, 1,122 were sailing under the British flags and 543 under foreign flags.

One thousand one hundred and fifteen Bills of Health were issued to Dhows against 876 for the year 1926.

The accompanying table "A" gives a list of vessels on board of which infectious diseases existed on arrival. In the case of these vessels, all sanitary precautions were taken to prevent the spread of disease.

The following cases of infectious diseases were landed from the shipping :—

Small-pox	...	6	Jigger	.	5
Chicken-pox	...	2	Pneumonia	...	1

II.—*Pilgrim Traffic*

Five ships carrying pilgrims passed through the Port of Aden during the year. All were medically examined but they were not granted pratique.

Year	Number of ships	Number of Pilgrims	Number of deaths
1927	5	6,340	1

III.—*Table "A"*

The following is the list of vessels on board of which cases of infectious diseases existed on arrival at this Port during the year :—

Date	Name of ship	Nationality	From	To	No. of cases	Remarks
14th January 1927.	S. S. Khiva	British	London	Sydney	2 C.P.	Treated O. B.
19th January 1927.	H. T. Nevasa	Do.	Bombay	Southampton.	1 Mls.	Do.
4th February 1927.	S. S. Malda	Do.	Colombo	London	1 Mps.	Do.
13th February 1927.	„ Nankin	Do.	Do.	Do.	1 Pneu.	Landed.
27th February 1927.	„ Jehangir	Do.	Bombay	Jedda	2 S.P.	Do.
3rd March 1927 ...	„ H a k o z a k i Maru.	J a p a n e s e.	Colombo	London	1 Mls.	Treated O. B.
19th March 1927.	„ Ranchi	British	London	Bombay	1 Mls.	} Do
Do. ...	Do.	Do.	Do.	Do.	1 Mps.	



Date	Name of ship	Nationality	From	To	No. of cases	Remarks
2nd April 1927 ...	S.S. Lauterfels ...	German.	M a r m a - goa.	Bremen ...	1 S.P. ...	Landed.
12th April 1927 ...	„ Ranchi ...	British .	Bombay ...	London ...	1 C.P. ...	Do.
2nd May 1927 ...	„ Olivebank ...	Do. ...	Rangoon .	Portsaid...	1 C.P. ...	Do.
16th May 1927 ...	„ Commissaire Ramel.	French .	Sydney ...	Marseille .	2 Mls. ...	Treated O. B.
21st July 1927 ..	„ Zayani ...	British .	Bombay ...	Jedda ...	1 S.P. ...	Landed.
20th November 1927.	„ Casaregis ...	Italian...	M o g a - discio.	Genova ...	5 J.R. ...	Do.
3rd December 1927.	„ Naldera ...	British .	London ...	Australia .	1 C.P. ...	Treated O. B.
4th December 1927.	„ Clan Mac- fadyen.	Do. ...	Sydney ...	Dunkirk .	3 C.P. ...	Do.
9th December 1927.	„ Somers et- shire.	Do. ...	Colombo .	South am- pton.	2 Infl. ...	Do.
17th December 1927.	„ Nagoya ...	Do. ...	Calcutta...	London ...	1 S.P. ...	Landed.
26th December 1927.	„ B r i t i s h Hussar.	Do. ...	Abadan ...	Swansea...	1 S.P. ...	Do.

N.B.—S.P. stands for Small-pox, C.P. stands for Chicken-pox, Mls. stands for Measles, J.R. stands for Jigger, Mps. stands for Mumps, Infl. stands for influenza and Pneu. stands for Pneumonia.

#### IV

The following are the names and other information regarding the pilgrim ships which passed through Aden during the year under report :—

Date	Name of ship	Nationality	From	To	Number of		
					Pilgrims	Infectious cases	Deaths
3rd February 1927.	S. S. Khosru ...	British .	Karachi ...	Jedda ...	1,294	.....	...
27th February 1927.	„ Jehangir...	Do. ...	Bombay ...	Do. ...	1,163	.....	1
8th April 1927 ...	„ Akbar ...	Do. ...	Do. ...	Do. ...	1,533	.....	...
24th April 1927 ...	„ Khosru ...	Do. ...	Karachi ...	Do. ...	1,511	.....	...
18th September 1927.	„ Jehangir...	Do. ...	Bombay ...	Mokalla ...	839	.....	...

#### V.—Establishment

Lieutenant-Colonel E. S. Phipson, D.S.O., M.D., M.R.C.P., D.P.H., D.T.M. & H., I.M.S., Health Officer of the Port from 1st January to 31st December 1927.

#### VI.—Office Establishment

Mr. E. Naser, Head Clerk to the Health Officer of the Port from 1st January to 31st December 1927.

Peon Omer Bubaker from 1st January to 31st December 1927.

Peon Abdulla Najee from 1st to 31st January 1927 and Peon Abdulla Hussein from 1st February to 31st December 1927.

#### VII.—*Launch Establishment*

Driver Hussein Noman from 1st January to 30th April 1927, Stoker Abdo Noman acted vice the permanent incumbent from 1st May to 31st October 1927.

Sukani Mohamed Magon from 1st January to 31st December 1927.

Abdulla Saadan outsider has been appointed to act as temporary Stoker in place of Abdo Noman, offg. Driver from 1st May to 31st October 1927.

Stoker Abdo Noman granted three months' leave from 1st November and Abdulla Saadan was re-appointed to act in the leave vacancy with effect from that date.

Lascar Mohamed Elmi from 1st January to 31st July 1927. From 1st August to 31st December 1927 was on leave without pay and outsider Mohamed Hassan was appointed to act in the leave vacancy with effect from that date.

#### VIII.—*Disinfecting Stove*

A fireman was retained for the care of the Disinfecting Stove on Flint Island during the year in accordance with Government Order, General Department, No. 4607, dated 18th April 1920.

E. S. PHIPSON,

M.D. (Lond.), D.P.H.,

Lieut.-Colonel, I.M.S.,

Health Officer of the Port, Aden.



## APPENDIX II

The following table shews year of completion of drainage or water-works and a comparison of mean death-rate in the towns concerned for periods preceding and subsequent to installation.

In column 7 is given for comparison the death-rate of the adjoining rural circle for the year under report:—

District.	Town.	Date of completion of works of		Mean death-rate (a)		Death-rate in adjoining rural circle (a).	Mean death-rate from cholera <i>plus</i> dysentery and diarrhoea.		Remarks
		Drainage.	Water supply.	For years preceding the installation.	For the years (succeeding installation) ending 1927.		For years preceding works.	For the years (following the works) ending 1927.	
1	2	3	4	5	6	7	8	9	10
Sholapur ...	Sholapur ...	...	1917 ...	61·01	33·90	31·72	14·05	2·24	* Chlorination of water supply began in 1916.
Do. ...	Pandharpur.	...	1911 ...	49·98	55·31	27·68	19·60	8·83	
Nasik ...	Nasik ...	...	1913 ...	52·73	33·44	25·95	11·33	1·94	
Bijapur ...	Bijapur ...	...	1913 ...	30·08	23·17	26·55	1·77	1·99	
Poona ...	Lonavla ...	...	1915 ...	13·68	25·37	19·03	1·12	1·60	
Do. ...	Poona City*.	1916 ...	...	36·47	39·58	13·93	10·18	2·56	
Satara ...	Karad ...	...	1916 ...	18·58	14·50	31·73	7·10	0·89	
Sholapur ...	Barsi ...	...	1917 ...	44·41	37·86	40·63	5·83	3·12	
Nasik ...	Trimbak ...	...	1921 ...	43·88	17·99	25·95	2·35	0·75	
Poona ...	Poona Cantonment.†	...	1916 ...	23·49	12·80	13·93	2·07	0·99	
Sukkur ...	Sukkur ...	...	1924 ...	21·48	18·38	16·86	0·48	0·32	† Change in type of installation.

(a) Exclusive of Plague and Influenza.

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### APPENDIX III

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## APPENDIX

ANNUAL FORM NO. I.—Showing the BIRTHS registered in the

1	2	3			4		
Number.	Districts.	POPULATION ACCORDING TO CENSUS OF 1921.			NUMBER OF BIRTHS REGISTERED.		
		Male.	Female.	Total.	Male.	Female.	Total.
	<i>Western Registration District.</i>						
1	East Khándesh .. ..	545,376	529,746	1,075,122	26,231	24,853	51,087
2	West Khándesh .. ..	309,511	303,201	612,712	16,182	15,576	31,758
3	Násik .. ..	418,510	406,706	825,216	20,553	19,408	39,961
4	Thána .. ..	388,310	368,589	756,899	13,780	12,711	26,491
5	Bombay Suburban .. ..	87,567	63,874	151,441	1,522	1,323	2,845
6	Kolába ... ..	279,350	283,122	562,472	11,913	11,230	23,143
7	City of Bombay .. ..	751,948	393,867	1,148,815	10,816	10,486	21,302
	<i>Central Registration District.</i>						
8	Ahmednagar .. ..	362,947	361,031	723,978	18,603	17,641	36,244
9	Poona .. ..	500,601	487,080	987,681	18,853	17,155	36,008
10	Sholápur .. ..	382,374	359,256	741,630	17,243	16,230	33,473
11	Sátára .. ..	511,238	514,457	1,025,695	22,377	20,893	43,270
12	Ratnágiri .. ..	525,085	628,895	1,153,980	19,690	18,594	38,284
	<i>Southern Registration District.</i>						
13	Belgaum .. ..	484,615	465,047	949,662	20,094	19,443	39,537
14	Dhárwár .. ..	528,348	507,861	1,036,209	21,279	20,184	41,463
15	Bijápur .. ..	405,148	391,208	796,356	16,453	15,713	32,166
16	Kánara .. ..	203,950	197,526	401,476	7,348	6,769	14,117
	<i>Gujarát Registration District.</i>						
17	Surat .. ..	337,276	336,845	674,121	14,103	13,555	27,658
18	Broach .. ..	153,568	149,143	302,711	7,511	7,138	14,649
19	Kaira .. ..	379,702	331,203	710,905	14,465	13,054	27,519
20	Panch Maháls .. ..	183,385	181,446	374,831	8,659	8,084	16,743
21	Ahmedabad .. ..	473,693	414,231	887,924	17,400	15,974	33,374
	<i>Sind Registration District.</i>						
22	Karáchi .. ..	302,563	228,094	530,657	7,983	7,179	15,162
23	Hyderabad .. ..	316,834	250,415	567,249	5,088	4,039	9,127
24	Thar and Párkar .. ..	221,074	175,233	396,307	5,155	4,171	9,326
25	Nawabshah .. ..	233,826	184,826	418,652	5,236	3,841	9,077
26	Lárkána .. ..	331,204	266,733	597,937	7,124	5,530	12,654
27	Sukkur .. ..	281,493	227,869	509,362	7,499	5,947	13,446
28	Upper Sind Frontier .. ..	134,321	106,293	240,614	3,531	2,870	6,401
	Total for the Presidency ..	10,048,817	9,116,797	19,165,614	366,694	339,591	706,285

## III

## DISTRICTS of the BOMBAY PRESIDENCY during the year 1927.

5			6	7	8	9		
RATIO OF BIRTHS PER 1,000 OF POPULATION.			Number of males born to every 100 females born.	Excess of Births over Deaths per 1,000 of Popu- lation.	Excess of Deaths over Births per 1,000 of Popu- lation.	MEAN RATIO OF BIRTHS PER 1,000 DURING PREVIOUS FIVE YEARS.		
Male.	Female.	Total.				Male.	Female.	Total.
24.41	23.11	47.52	105.56	18.49	..	23.97	22.43	46.40
26.41	25.42	51.83	103.89	27.53	..	23.69	22.57	46.26
24.91	23.52	48.43	105.39	20.11	..	22.56	20.99	43.55
18.21	16.79	35.00	108.41	15.14	..	16.70	15.60	32.30
10.05	8.73	18.78	115.04	2.23	..	9.45	8.60	18.05
21.18	19.96	41.14	106.05	17.22	..	19.83	18.69	38.52
9.41	9.13	18.54	103.15	....	5.29	9.16	8.76	17.92
25.60	24.46	50.06	105.45	20.24	..	23.72	22.36	46.08
19.09	17.37	36.46	109.91	8.19	..	17.42	15.92	33.34
23.25	21.88	45.13	106.24	10.52	..	21.23	20.00	41.23
21.82	20.37	42.19	107.10	10.76	..	20.16	19.17	39.33
17.06	16.11	33.17	105.89	9.51	..	19.66	18.48	38.14
21.16	20.47	41.63	103.35	8.33	..	20.59	19.51	40.10
20.54	19.48	40.01	105.43	9.98	..	18.48	17.76	36.24
20.66	19.73	40.39	104.71	12.73	..	19.91	19.25	39.16
18.30	16.86	35.16	108.55	4.00	..	18.06	16.95	35.01
20.92	20.11	41.03	104.04	14.47	..	20.08	18.69	38.77
24.41	23.20	47.61	105.23	19.71	..	23.22	22.28	45.50
20.35	18.36	38.71	110.81	11.12	..	19.98	17.67	37.65
23.10	21.57	44.67	107.11	23.34	..	19.74	18.66	38.40
19.60	17.99	37.59	108.93	7.20	..	19.61	18.00	37.61
15.04	13.53	28.57	111.20	8.87	..	13.11	11.29	24.40
8.97	7.12	16.09	125.97	1.43	..	9.79	7.55	17.34
13.01	10.52	23.52	123.59	3.50	..	11.85	9.36	21.21
12.51	9.17	21.68	136.32	6.93	..	12.75	9.50	22.25
11.91	9.25	21.16	128.82	6.50	..	12.19	9.33	21.52
14.72	11.68	26.40	126.10	11.57	..	15.36	12.29	27.65
14.67	11.97	26.64	123.03	15.25	..	11.65	8.64	20.29
19.13	17.72	36.85	107.98	11.13	..	18.24	16.81	35.05



ANNUAL FORM No. II.—*Showing the BIRTHS and DEATHS registered*

1	2				3	4	5	
Number.	Districts.				Area in square miles.	Average population per square mile.	POPULATION (CENSUS,	
							Male.	Female.
	Western Registration District.							
1	East Khándesh	...	...	...	4,551	236	545,376	529,746
2	West Khándesh	...	...	..	5,438	113	309,511	303,201
3	Násik	...	...	...	5,877	140	418,510	406,706
4	Thána	...	...	...	3,434	220	388,310	368,589
5	Bombay Suburban	...	...	.	142	1,066	87,567	63,874
6	Kolába	...	...	...	2,169	259	279,350	283,122
7	Bombay City	...	...	..	24	47,867	751,948	396,867
	Central Registration District.							
8	Ahmednagar	...	...	...	6,610	109	362,947	361,031
9	Poona	...	...	..	5,357	184	500,601	487,080
10	Sholápur	...	...	...	4,556	163	382,374	359,256
11	Sátára	...	...	...	4,910	209	511,238	514,457
12	Ratnágiri	...	...	...	3,989	289	525,085	628,895
	Southern Registration District.							
13	Belgaum	...	...	...	4,611	206	484,615	465,047
14	Dhárwár	...	...	...	4,606	225	528,348	507,861
15	Bijápur	...	...	...	5,707	139	405,148	391,208
16	Kánara	...	..	...	3,946	102	203,950	197,526
	Gujarát Registration District.							
17	Surat	...	...	...	1,651	408	337,276	336,845
18	Broach	...	...	...	1,468	210	158,568	149,143
19	Kaira	...	...	...	1,596	445	379,702	331,203
20	Panch Maháls	...	...	...	1,606	233	193,385	181,446
21	Ahmedabad	...	...	...	3,824	232	473,693	414,231
	Sind Registration District.							
22	Karáchi	...	...	...	11,231	47	802,563	228,094
23	Hyderabad	...	...	...	4,417	128	316,834	250,415
24	Thar and Párkar	...	...	...	13,636	29	221,074	175,238
25	Nawabshah	...	...	...	3,889	107	233,826	184,826
26	Lárkána	..	...	...	5,057	118	331,204	266,733
27	Sukkur	.	...	...	5,612	91	281,493	227,869
28	Upper Sind Frontier	...	...	...	2,664	90	134,321	106,293
	Total for the Presidency ...				122,578	126	10,048,817	9,116,797

*in the DISTRICTS of the BOMBAY PRESIDENCY during the year 1927.*

1921).	6		7			8
	BIRTHS.		NUMBER OF DEATHS REGISTERED.			Number of Deaths of males to every 100 deaths of females.
Total.	Total Number.	Birth-rate per 1,000 of population.	Male.	Female.	Total.	
1,075,122	51,087	47.52	15,887	15,328	31,215	103.65
612,712	31,758	51.83	7,560	7,331	14,891	103.12
825,216	39,961	48.43	12,105	11,263	23,368	107.47
756,899	26,491	35.00	7,759	7,270	15,029	106.73
151,441	2,845	18.78	1,404	1,103	2,507	127.29
562,472	23,143	41.14	6,887	6,570	13,457	104.82
1,148,815	21,302	18.54	15,097	12,287	27,384	122.87
723,978	36,244	50.06	11,235	10,352	21,587	108.53
987,681	36,008	36.46	14,676	13,247	27,923	110.79
741,630	33,473	45.13	13,298	12,370	25,668	107.50
1,025,695	43,270	42.19	16,448	15,793	32,241	104.15
1,153,980	38,284	33.17	13,463	13,846	27,309	97.23
949,662	39,537	41.63	16,111	15,520	31,631	103.81
1,036,209	41,463	40.01	15,931	15,194	31,125	104.85
796,356	32,166	40.39	11,350	10,680	22,030	106.27
401,476	14,117	35.16	6,342	6,169	12,511	102.80
674,121	27,658	41.03	9,174	8,730	17,904	105.09
307,711	14,649	47.61	4,265	4,321	8,586	98.70
710,905	27,519	38.71	10,004	9,616	19,620	104.03
374,831	16,743	44.67	4,051	3,944	7,995	102.71
887,924	33,374	37.55	13,879	13,102	26,981	105.93
530,657	15,162	28.57	5,770	4,683	10,453	123.21
567,249	9,127	16.09	4,716	3,598	8,314	131.07
396,307	9,326	23.52	4,363	3,574	7,937	122.07
418,652	9,077	21.68	3,527	2,647	6,174	133.24
597,937	12,654	21.16	4,790	3,977	8,767	120.44
509,362	13,446	26.40	4,222	3,331	7,553	126.75
240,614	6,401	26.64	1,470	1,261	2,731	116.57
19,165,614	706,285	36.85	255,784	237,107	492,891	107.88



1	2				DEATHS PER 1,000 OF				
Number.	Districts.				Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.
	<i>Western Registration District.</i>								
1	East Khândesh	...	...	...	1·27	·61	...	13·18	1·93
2	West Khândesh	...	...	...	·19	·09	...	10·51	·97
3	Násik	...	...	...	·35	·56	...	11·63	1·65
4	Thána	...	...	...	·25	·10	·02	8·68	·62
5	Bombay Suburban	...	...	...	·07	·34	·20	3·50	1·70
6	Kolába	...	...	...	·45	·05	·22	8·76	1·41
7	Bombay City	...	...	...	·07	·73	·18	2·16	1·26
	<i>Central Registration District.</i>								
8	Ahmednagar	...	...	...	1·13	·22	·05	6·35	3·03
9	Poona	...	...	...	1·25	·58	...	10·02	1·95
10	Sholápur	...	...	...	4·72	·07	·08	11·24	2·43
11	Sátára	...	...	...	3·97	·27	·67	10·81	2·36
12	Ratnágiri	...	...	...	·01	·26	...	7·12	1·06
	<i>Southern Registration District.</i>								
13	Belgaum	...	...	...	7·97	·28	·60	6·75	2·74
14	Dhárwár	...	...	...	3·49	·03	1·54	9·09	·86
15	Bijápur	...	...	...	3·38	·03	·51	9·47	1·49
16	Kánara	...	...	...	·45	·03	·74	11·43	2·59
	<i>Gujarát Registration District.</i>								
17	Surat	...	...	...	·02	1·18	·07	8·08	·82
18	Broach	...	...	...	·00	·14	·00	11·91	·58
19	Kaira	...	...	...	·00	·01	·00	9·04	1·14
20	Panch Maháls	...	...	...	·00	·05	·00	12·75	·55
21	Ahmedabad	...	...	...	·08	·03	·00	14·87	·78
	<i>Sind Registration District.</i>								
22	Karáchi	...	...	...	·00	·09	...	9·15	·86
23	Hyderabad	...	...	...	...	·06	...	9·93	·19
24	Thar and Párkar	...	...	...	...	·12	...	15·77	·14
25	Nawabshah	...	...	...	·02	·23	...	12·92	·04
26	Lárkána	...	...	...	·02	·14	...	12·93	·03
27	Sukkur	...	...	...	·22	·04	·00	11·44	·12
28	Upper Sind Frontier	...	...	...	...	·00	...	10·78	·01
	Total for the Presidency				1·36	·27	·21	9·73	1·33

No. II—contd.

9						10		
POPULATION FROM						MEAN RATIO OF DEATHS PER 1,000 DURING PREVIOUS FIVE YEARS.		
Respiratory Diseases.	Injuries.	All other causes.	All Causes.			Male.	Female.	Total.
			Male.	Female.	Total.			
3.30	.26	8.03	29.11	28.93	29.03	31.76	31.52	31.64
3.16	.29	9.09	24.42	24.18	24.30	27.79	27.25	27. 2
4.91	.33	8.88	28.92	27.69	28.31	30.30	28.62	29.47
3.63	.36	5.96	19.98	19.72	19.85	23.74	22.86	23.34
4.34	.44	5.96	16.03	17.27	16.55	16.90	19.15	17.85
4.81	.49	7.74	24.65	23.25	23.93	27.26	25.38	26.31
9.98	.56	8.88	20.08	30.96	23.84	26.15	39.28	30.68
5.26	.29	13.49	30.47	23.63	29.82	30.00	27.54	28.98
6.03	.35	8.09	29.32	27.18	28.27	29.07	29.11	28.12
3.40	.47	12.20	34.88	34.43	34.61	30.76	30.96	30.86
2.75	.53	10.07	32.17	30.70	31.43	27.52	26.50	27.01
5.02	.54	9.75	25.40	22.02	23.66	24.33	20.28	22.13
3.71	.48	10.79	33.24	33.37	33.31	26.09	26.73	26.42
3.14	.39	11.50	30.15	29.92	30.04	30.92	31.64	31.27
3.01	.38	9.39	28.01	27.30	27.66	27.18	26.88	27.03
2.75	.45	12.72	31.10	31.23	31.16	29.66	29.30	29.48
9.46	.36	6.57	27.20	25.92	26.56	28.75	27.80	28.28
7.81	.65	6.81	26.89	28.90	27.90	31.74	33.26	32.48
9.66	.62	7.12	26.35	29.03	27.59	26.48	27.60	27.00
2.79	.47	4.72	20.95	21.74	21.33	20.89	21.25	21.06
7.56	.51	6.56	29.20	31.63	30.39	29.17	30.48	29.77
4.79	.24	4.56	19.07	20.53	19.69	18.16	19.43	18.73
2.41	.20	1.87	14.88	14.36	14.66	15.00	14.67	14.85
2.31	.36	1.33	19.74	20.32	20.03	17.13	17.75	17.15
.50	.23	.50	15.08	14.32	14.74	14.30	14.59	14.40
.40	.25	.84	14.46	14.87	14.66	14.00	14.33	14.16
.56	.25	2.20	15.00	14.62	14.83	17.54	17.24	17.39
.11	.20	.25	10.94	11.86	11.35	12.17	12.89	12.48
4.59	.41	7.81	25.45	26.01	25.72	25.67	26.08	25.86



## ANNUAL FORM No. III.—DEATHS registered in the DISTRICTS

1	2				3				
Number.	Districts.				January.	February.	March.	April.	May.
	<i>Western Registration District.</i>								
1	East Khándesh	...	...	...	2,219	2,069	2,566	2,855	2,492
2	West Khándesh	...	...	...	1,254	940	1,117	1,177	1,139
3	Násik	...	...	...	1,857	1,590	1,723	2,248	1,980
4	Thána	...	...	...	1,556	1,251	1,362	1,299	1,148
5	Bombay Suburban	..	...	..	245	214	237	229	160
6	Kolaba	...	...	...	1,285	1,200	1,176	1,110	1,003
7	City of Bombay	...	...	...	2,328	2,293	2,603	2,391	2,258
	<i>Central Registration District.</i>								
8	Ahmednagar	...	...	..	1,355	1,173	1,388	1,692	1,897
9	Poona	...	...	...	1,915	1,864	2,245	2,433	2,451
10	Sholápur	...	...	...	1,549	1,447	1,465	1,790	2,137
11	Sátára	...	...	..	2,017	1,668	2,052	2,590	2,552
12	Ratnágiri	...	...	...	2,762	2,382	2,506	2,594	1,938
	<i>Southern Registration District.</i>								
13	Belgaum	...	...	...	1,712	1,640	3,721	5,372	3,223
14	Dhárwar	...	...	..	2,419	2,164	3,205	3,676	2,646
15	Bijápur	...	...	...	1,521	1,314	1,717	2,998	2,070
16	Kanara	...	...	...	1,223	1,065	976	905	727
	<i>Gujarát Registration District.</i>								
17	Surat	...	...	...	1,911	1,709	1,816	1,549	1,409
18	Broach	...	...	...	751	558	642	614	614
19	Kaira	...	...	...	1,443	1,104	1,284	1,261	1,197
20	Panch Maháls	...	...	...	586	499	627	537	507
21	Ahmedabad	...	...	...	2,155	1,875	2,040	1,917	1,657
	<i>Sind Registration District.</i>								
22	Karáchi	...	..	...	1,333	985	905	657	651
23	Hyderabad	...	...	...	1,250	1,076	856	617	534
24	Thar and Párkar	...	...	..	1,198	1,058	887	645	579
25	Nawabshah	...	...	..	960	861	589	403	424
26	Lárkána	...	...	...	1,199	809	740	632	571
27	Sukkur	...	...	...	874	626	627	583	557
28	Upper Sind Frontier	...	...	...	289	226	225	153	171
	Total for the Presidency ..				41,166	35,660	41,297	44,927	38,692
	Ratio of deaths per 1,000 in each month ..				2.15	1.86	2.16	2.34	2.02

*of the BOMBAY PRESIDENCY during each month of the year 1927*

							4	5
June.	July.	August.	September.	October.	November.	December.	Total Deaths registered during the year.	Number.
1,709	2,210	4,605	3,457	2,578	2,472	1,983	31,215	1
918	1,057	1,466	1,466	1,307	1,655	1,395	14,891	2
1,608	1,755	2,325	2,055	2,016	2,213	1,998	23,368	3
1,011	927	1,122	1,084	1,100	1,647	1,522	15,029	4
160	209	226	190	181	220	236	2,507	5
843	1,184	1,055	1,230	1,101	1,052	1,218	13,457	6
1,984	2,321	2,525	2,137	2,167	2,170	2,207	27,384	7
1,573	2,359	2,864	2,100	1,906	1,736	1,544	21,587	8
2,327	2,961	2,863	2,343	2,224	2,135	2,162	27,923	9
2,138	3,853	3,800	2,098	1,947	1,710	1,734	25,668	10
2,720	3,912	4,071	3,067	2,988	2,337	2,267	32,241	11
1,894	2,049	2,047	2,151	2,300	2,212	2,474	27,309	12
3,118	2,613	2,231	1,915	2,079	1,952	2,055	31,631	13
2,180	2,066	2,042	2,089	2,512	2,856	3,270	31,125	14
1,717	2,408	1,865	1,635	1,723	1,568	1,494	22,030	15
875	1,113	1,127	1,017	1,099	1,078	1,306	12,511	16
1,171	1,204	1,390	1,266	1,309	1,563	1,607	17,904	17
483	595	764	797	871	1,053	844	8,586	18
1,136	1,219	1,484	2,021	2,650	2,868	1,953	19,620	19
416	493	652	754	854	1,141	929	7,995	20
1,480	1,467	2,116	2,723	3,062	3,539	2,950	26,981	21
589	532	890	979	808	1,036	1,088	10,453	22
432	383	414	482	628	771	871	8,314	23
470	326	320	418	631	738	667	7,937	24
369	303	261	349	514	524	617	6,174	25
469	497	497	518	728	1,126	981	8,767	26
532	506	497	535	680	760	776	7,553	27
152	170	138	199	280	411	317	2,731	28
34,474	40,692	45,657	41,075	42,243	44,543	42,465	492,891	
1.80	2.12	2.38	2.14	2.20	2.33	2.22	25.72	



ANNUAL FORM NO. IV.—DEATHS *registered according to AGE in*

1	2				3	
No.	Districts.				Under 1 year.	
					Male.	Female
	<i>Western Registration District.</i>					
1	East Khándesh	...	...	...	4,777	4,092
2	West Khándesh	...	...	...	2,363	2,160
3	Násik	...	...	...	3,881	3,200
4	Thána	...	...	...	1,666	1,382
5	Bombay Suburban	...	...	...	295	228
6	Kolába	...	...	...	1,678	1,444
7	Bombay City	...	...	...	3,667	3,131
	<i>Central Registration District.</i>					
8	Ahmednagar	...	...	...	3,442	2,785
9	Poona	...	...	...	3,977	3,086
10	Sholápur	...	...	...	3,459	2,840
11	Sátára	...	...	...	3,712	3,111
12	Ratnágiri	...	...	...	2,016	1,619
	<i>Southern Registration District.</i>					
13	Belgaum	...	...	...	2,862	2,336
14	Dhárwár	...	...	...	3,051	2,523
15	Bijápur*	...	...	...	2,461	1,909
16	Kánara	...	...	...	1,408	1,260
	<i>Gujarat Registration District.</i>					
17	Surat	...	...	...	2,649	2,438
18	Broach	...	...	...	1,306	1,195
19	Kaira	...	...	...	2,109	2,147
20	Panch Maháls	...	...	...	958	920
21	Ahmedabad	...	...	...	3,519	3,278
	<i>Sind Registration District.</i>					
22	Karáchi	...	...	...	1,604	1,427
23	Hyderabad	...	...	...	885	783
24	Thar and Parkar	...	...	...	749	665
25	Nawabshah	...	...	...	645	513
26	Lárkána	...	...	...	1,017	899
27	Sukkur	...	...	...	1,086	823
28	Upper Sind Frontier	...	...	...	322	251
	Total for the Presidency				61,564	52,445
	Population according to Census of 1921				287,146	282,999
	Ratios per 1,000 living				214.40	185.32

*the DISTRICTS of the BOMBAY PRESIDENCY during the year 1927*

4		5		6		7	
1 year and under 5.		5 and under 10.		10 and under 15.		15 and under 20.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
4,515	4,803	960	861	430	389	249	416
2,068	2,166	395	367	182	204	140	204
2,969	3,053	489	453	281	277	188	263
1,300	1,301	435	432	230	254	205	237
208	187	50	43	34	42	33	35
1,140	1,221	302	308	181	165	169	184
2,118	2,145	394	487	299	370	476	550
2,458	2,425	429	450	294	299	211	309
3,713	3,404	500	504	326	341	399	633
3,248	3,043	755	791	405	370	245	416
3,818	3,799	985	994	590	522	377	540
2,230	2,352	595	643	306	333	337	339
2,949	3,270	1,454	1,457	929	747	522	556
2,525	2,687	989	976	766	763	445	526
2,206	2,306	700	697	439	416	236	328
671	708	251	313	166	177	180	211
1,778	1,816	436	425	207	201	172	241
1,068	1,114	161	180	70	100	82	92
2,730	2,600	372	340	243	209	214	206
910	921	261	316	130	145	99	110
3,309	3,342	537	499	283	296	304	380
847	763	200	223	167	122	153	191
492	436	201	177	145	123	185	189
387	407	237	203	192	143	187	187
462	389	193	156	131	99	129	115
599	546	298	265	167	100	184	171
529	447	188	141	115	115	140	168
200	184	114	91	48	55	46	45
51,447	51,835	12,881	12,792	7,756	7,377	6,312	7,842
885,160	924,937	1,468,775	1,379,851	1,224,010	969,652	751,226	650,813
58.12	56.04	8.77	9.27	6.34	7.61	8.40	12.05



1	2				8	
No.	Districts.				20 and under 30.	
					Male.	Female.
<i>Western Registration District.</i>						
1	East Khándesh	...	...	...	550	918
2	West Khándesh	...	...	...	317	425
3	Násik	...	...	...	502	667
4	Thána	...	...	...	503	720
5	Bombay Suburban	...	...	...	130	137
6	Kolába	...	...	...	444	543
7	Bombay City	...	...	...	1,824	1,579
<i>Central Registration District.</i>						
8	Alhmednagar	...	...	...	472	590
9	Poona	...	...	...	959	1,244
10	Sholápur	...	...	...	681	941
11	Sátára	...	...	...	921	1,179
12	Ratnágiri	...	...	...	927	1,126
<i>Southern Registration District.</i>						
13	Belgaum	...	...	...	1,201	1,424
14	Dhárwár	...	...	...	1,263	1,691
15	Bijápur	...	...	...	696	851
16	Kánara	...	...	...	590	741
<i>Gujarat Registration District.</i>						
17	Surat	...	...	...	489	672
18	Broach	...	...	...	151	306
19	Kaira	...	...	...	506	624
20	Panch Mahals	...	...	...	246	341
21	Ahmedabad	...	...	...	867	1,075
<i>Sind Registration District.</i>						
22	Karáchi	...	...	...	536	533
23	Hyderabad	...	...	...	571	428
24	Thar and Párkar	...	...	...	463	415
25	Nawábsháh	...	...	...	400	402
26	Lárkána	...	...	...	449	558
27	Sukkur	...	...	...	397	427
28	Upper Sind Frontier	...	...	...	122	148
Total for the Presidency					17,177	20,705
Population according to Census of 1921					1,781,925	1,656,476
Ratios per 1,000 living					9.64	12.50

No. IV—*concl'd.*

9		10		11		12		13
30 and under 40.		40 and under 50.		50 and under 60.		60 and upwards.		No.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
731	758	793	547	821	554	2,061	1,990	1
377	388	421	262	435	292	862	863	2
740	722	701	509	747	506	1,607	1,613	3
772	729	771	482	774	574	1,103	1,159	4
188	125	133	80	132	61	196	165	5
539	568	573	441	657	470	1,204	1,226	6
1,929	1,129	1,420	711	1,235	605	1,735	1,580	7
671	641	690	544	685	514	1,883	1,795	8
1,083	833	949	701	1,051	887	1,719	1,614	9
895	888	743	641	728	550	2,139	1,890	10
1,104	1,075	989	806	1,078	762	2,874	3,005	11
1,004	1,148	1,014	947	1,251	1,072	3,783	4,267	12
1,403	1,295	1,262	954	1,114	887	2,415	2,594	13
1,623	1,586	1,401	1,011	1,320	955	2,548	2,476	14
918	839	875	589	854	691	1,965	2,054	15
772	640	711	508	635	494	958	1,117	16
588	659	635	468	736	460	1,484	1,350	17
224	298	249	197	321	221	633	618	18
602	623	684	575	808	592	1,736	1,700	19
294	256	269	174	312	212	572	549	20
1,058	901	1,159	760	1,119	785	1,724	1,786	21
598	412	511	283	425	221	729	508	22
592	432	588	310	444	273	613	447	23
588	461	521	353	443	282	596	458	24
405	307	389	197	322	177	451	292	25
520	464	525	269	401	237	630	468	26
387	313	374	251	346	192	660	454	27
140	124	124	91	128	87	226	185	28
20,745	18,614	19,474	13,661	19,322	13,613	39,106	38,223	
1,642,370	1,349,143	1,025,082	901,989	615,661	556,308	457,220	480,976	
12.63	13.80	19.00	15.14	31.38	24.47	85.53	79.47	



ANNUAL FORM NO. IV (a).—*Showing the details of DEATHS during the*

No.	Districts.	DEATHS						
		Not exceeding one month.						
		Male.			Female.			Total of columns 5 and 8.
		Under one week.	Over one week.	Total.	Under one week.	Over one week.	Total.	
1	2	3	4	5	6	7	8	9
	<i>Western Registration District.</i>							
1	East Khándesh ... ..	1,180	925	2,105	954	802	1,756	3,861
2	West Khándesh ... ..	610	447	1,057	501	389	890	1,947
3	Násik ... ..	911	667	1,578	678	538	1,216	2,794
4	Thána ... ..	495	338	833	382	256	638	1,471
5	Bombay Suburban ... ..	108	40	148	72	33	105	253
6	Kolába ... ..	597	353	950	515	340	855	1,805
7	Bombay City ... ..	907	537	1,444	670	415	1,085	2,529
	<i>Central Registration District.</i>							
8	Ahmednagar ... ..	903	492	1,395	748	405	1,153	2,548
9	Poona ... ..	763	679	1,442	661	526	1,187	2,629
10	Sholápur ... ..	784	486	1,270	601	459	1,060	2,330
11	Sátára ... ..	769	525	1,324	652	473	1,125	2,449
12	Ratnágiri ... ..	524	438	962	408	333	741	1,703
	<i>Southern Registration District.</i>							
13	Belgaum ... ..	707	565	1,272	512	459	971	2,243
14	Dhárwár ... ..	824	631	1,455	596	535	1,131	2,586
15	Bijápur ... ..	507	493	1,000	372	356	728	1,728
16	Kánara ... ..	635	312	947	537	259	796	1,743
	<i>Gujarát Registration District.</i>							
17	Surat ... ..	683	466	1,149	611	412	1,023	2,172
18	Broach ... ..	324	266	590	307	245	552	1,142
19	Kaira ... ..	454	410	864	458	411	869	1,733
20	Panch Maháls ... ..	256	205	461	216	191	407	868
21	Ahmedabad ... ..	789	510	1,299	629	474	1,103	2,402
	<i>Sind Registration District.</i>							
22	Karachi ... ..	368	249	617	304	226	530	1,147
23	Hyderabad ... ..	220	151	371	174	161	335	706
24	Thar and Párkar ... ..	175	152	327	169	128	297	624
25	Nawabshah ... ..	186	143	329	133	112	245	574
26	Lárkána ... ..	208	196	404	164	166	330	734
27	Sukkur ... ..	227	219	446	144	157	301	747
28	Upper Sind Frontier ... ..	75	88	163	51	49	100	263
	Total for the Presidency ...	15,219	10,983	26,202	12,219	9,310	21,529	47,731

*under one year* IN THE DISTRICTS *of the* BOMBAY PRESIDENCY  
year 1927

UNDER ONE YEAR.

Over one month and not exceeding six months.			Over six months and not exceeding twelve months.			Total, male, columns 5, 10 and 13.	Total, Female, columns 8, 11 and 14.	Total.	No.
Male.	Female.	Total.	Male.	Female.	Total.				
10	11	12	13	14	15	16	17	18	19
1,571	1,341	2,912	1,101	995	2,096	4,777	4,092	8,869	1
800	757	1,557	506	513	1,019	2,363	2,160	4,523	2
1,475	1,227	2,702	828	757	1,585	3,881	3,200	7,081	3
597	510	1,107	236	234	470	1,666	1,382	3,048	4
89	74	163	58	49	107	295	228	523	5
511	401	912	217	188	405	1,678	1,444	3,122	6
1,016	914	1,930	1,207	1,132	2,339	3,667	3,131	6,798	7
1,285	1,029	2,314	762	603	1,365	3,442	2,785	6,227	8
1,489	1,103	2,592	1,046	796	1,842	3,977	3,086	7,063	9
1,361	1,093	2,454	828	687	1,515	3,459	2,840	6,299	10
1,492	1,233	2,725	896	753	1,649	3,712	3,111	6,823	11
525	437	962	529	441	970	2,016	1,619	3,635	12
1,026	903	1,929	564	462	1,026	2,862	2,336	5,198	13
961	851	1,812	635	541	1,176	3,051	2,523	5,574	14
975	765	1,740	486	416	902	2,461	1,909	4,370	15
310	297	607	151	167	318	1,408	1,260	2,668	16
900	833	1,733	600	582	1,182	2,649	2,438	5,087	17
429	378	807	287	265	552	1,306	1,195	2,501	18
723	788	1,511	522	490	1,012	2,109	2,147	4,256	19
316	339	655	181	174	355	958	920	1,878	20
1,132	1,008	2,140	1,088	1,167	2,255	3,519	3,278	6,797	21
522	432	954	465	465	930	1,604	1,427	3,031	22
257	199	456	257	249	506	885	783	1,668	23
212	180	392	210	188	398	749	665	1,414	24
171	109	280	145	159	304	645	513	1,158	25
287	258	545	326	311	637	1,017	899	1,916	26
299	213	512	341	309	650	1,086	823	1,909	27
67	66	133	92	85	177	322	251	573	28
20,798	17,738	38,536	14,564	13,178	27,742	61,564	52,445	114,009	



ANNUAL FORM No. V.—DEATHS *registered according*  
PRESIDENCY *during*

1  No.	2			POPULATION			
	Districts.			Muhammadans.		Hindus.	
				Male.	Female.	Male.	Female.
	<i>Western Registration District.</i>						
1	East Khandesh	...	...	55,176	52,333	484,070	472,143
2	West Khandesh	...	...	16,011	15,346	262,850	256,881
2	Nasik	...	...	23,806	21,948	388,491	379,357
4	Thana	...	...	17,411	14,481	354,764	338,299
5	Bombay Suburban	...	...	3,728	5,625	65,684	46,744
6	Kolaba	...	...	14,012	14,342	262,562	266,748
7	Bombay City	...	...	126,177	57,210	543,171	289,272
	<i>Central Registration District.</i>						
8	Ahmednagar	...	...	18,966	17,870	327,801	325,681
9	Poona	...	..	23,591	19,913	465,217	454,887
10	Sholapur	...	...	30,467	28,235	346,655	326,392
11	Satara	...	...	18,337	17,652	483,403	488,459
12	Ratnagiri	...	...	34,410	46,581	486,985	578,134
	<i>Southern Registration District.</i>						
13	Belgaum	...	...	40,875	38,943	418,962	403,209
14	Dharwar	...	...	73,484	69,553	446,006	430,468
15	Bijapur	...	...	48,940	47,185	354,458	342,191
16	Kanara	...	...	12,580	13,822	182,887	175,191
	<i>Gujarat Registration District.</i>						
17	Surat	...	...	28,071	28,179	279,833	280,147
18	Broach	...	...	36,085	33,903	117,003	110,217
19	Kaira	...	...	34,193	31,022	328,634	284,525
20	Panch Mahals	...	...	13,888	12,797	171,905	161,201
21	Ahmedabad	...	...	53,637	45,433	399,443	348,852
	<i>Sind Registration District.</i>						
22	Karachi	...	...	213,208	168,986	82,381	53,744
23	Hyderabad	...	...	231,341	178,455	87,318	71,811
24	Thar and Parkar	...	..	118,596	94,139	98,214	77,812
25	Nawabshah	...	...	181,280	139,855	52,448	44,900
26	Larkana	...	...	277,501	222,052	53,024	44,130
27	Sukkur	...	...	200,273	158,123	79,859	68,329
28	Upper Sind Frontier	...	...	120,494	95,783	13,561	10,294
	Total for the Presidency ...			2,071,538	1,689,766	7,637,589	7,130,018

N.B.—This and all the other Statements refer to Indians only and not to Europeans. "Hindus"  
Note.—Population by classes in Form V includes Jail figures.

*to CLASSES and SEX in the Districts of the BOMBAY  
the year 1927*

3

ACCORDING TO THE CENSUS OF 1921.

Jains.		Christians.		Parsis.		Other Classes.		Total.		Total.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
4,708	3,992	625	518	261	178	536	582	545,376	529,746	1,075,122
2,255	1,832	543	445	120	70	28,244	28,649	309,511	303,201	612,712
4,076	3,445	1,577	1,524	509	400	51	32	418,510	406,706	825,216
1,524	744	13,339	13,112	1,532	1,907	159	150	388,310	368,589	756,899
1,354	632	10,471	9,608	1,246	1,199	84	66	87,567	63,874	151,441
1,153	487	622	482	177	139	837	925	279,350	283,122	562,472
17,587	6,297	32,198	16,096	27,948	24,286	5,505	3,718	751,948	396,867	1,148,815
6,867	6,171	10,967	11,185	90	90	62	34	364,753	361,031	725,784
6,706	4,984	5,109	5,448	1,557	1,510	454	448	500,601	487,080	987,681
4,015	3,413	1,067	1,055	170	161	...	...	382,374	359,256	741,630
8,104	7,197	1,102	886	261	237	31	26	511,238	514,457	1,025,695
819	821	3,078	3,339	22	14	16	11	525,085	628,895	1,153,980
21,868	19,987	2,963	2,840	59	62	22	7	484,615	465,047	949,662
5,741	4,809	3,321	2,888	129	121	45	24	528,348	507,861	1,036,209
1,675	1,320	537	526	19	11	...	...	405,148	391,208	796,356
595	519	8,051	7,994	9	4	1	...	203,950	197,526	401,476
5,427	4,817	948	680	5,037	6,014	17,960	17,008	337,276	336,845	674,121
1,758	1,497	1,406	1,178	1,045	1,176	1,271	1,172	158,568	149,143	307,711
3,210	3,128	13,276	12,236	54	40	335	252	379,702	331,203	710,905
956	857	1,626	1,555	127	113	4,883	4,923	181,446	374,831	374,831
18,353	17,094	2,424	1,947	861	802	174	173	473,693	414,231	887,924
635	483	3,611	2,348	1,396	1,323	1,899	1,219	302,563	228,094	530,657
45	37	127	87	34	23	14	8	316,834	250,415	567,249
150	118	43	16	4	4	4,067	3,144	221,074	175,233	396,307
1	...	19	13	3	...	75	58	233,826	184,826	418,652
...	...	27	9	2	...	650	542	331,204	266,733	597,937
8	8	161	117	67	56	1,836	1,252	281,493	227,869	509,362
29	20	4	6	...	...	233	190	134,321	106,293	240,614
119,619	94,709	119,242	98,138	42,739	39,940	69,444	64,613	10,050,623	9,116,797	19,167,420

include Hindus of all castes. "Other Classes" include Buddhists, Sikhs, Jews and all others.



1	2						
No.	Districts			Muhammadans.		Hindus.	
				Male.	Female.	Male.	Female.
	<i>Western Registration District.</i>						
1	East Khandesh	...	...	1,244	1,257	14,632	14,053
2	West Khandesh	...	...	255	273	7,292	7,042
3	Nasik	...	...	562	540	11,507	10,688
4	Thana	...	...	316	336	7,152	6,678
5	Bombay Suburban	...	...	113	95	1,116	868
6	Kolaba	...	...	356	328	6,498	6,196
7	Bombay City	...	...	3,250	2,591	10,183	8,304
	<i>Central Registration District.</i>						
8	Ahmednagar	...	...	517	432	10,657	9,849
9	Poona	...	...	626	603	13,970	12,574
10	Sholapur	...	...	870	816	12,358	11,494
11	Satara	...	...	546	503	15,743	15,167
12	Ratnagiri	...	...	902	928	12,481	12,829
	<i>Southern Registration District.</i>						
13	Belgaum	...	...	1,287	1,226	14,217	13,678
14	Dharwar	...	...	2,176	2,082	13,579	12,919
15	Bijapur	...	...	1,178	1,169	10,129	9,463
16	Kanara	...	...	376	403	5,736	5,538
	<i>Gujarat Registration District.</i>						
17	Surat	...	...	756	813	8,185	7,702
18	Broach	...	...	912	929	3,298	3,330
19	Kaira	...	...	920	831	8,906	8,583
20	Panch Mahals	...	...	247	275	3,781	3,645
21	Ahmedabad	...	...	1,617	1,536	11,795	11,071
	<i>Sind Registration District.</i>						
22	Karachi	...	...	3,719	2,847	1,957	1,780
23	Hyderabad	...	...	3,077	2,204	1,631	1,391
24	Thar and Parkar	...	...	2,399	1,965	1,960	1,606
25	Nawabshah	...	...	2,612	1,951	905	688
26	Larkana	...	...	3,802	3,065	984	909
27	Sukkur	...	...	2,480	1,896	1,723	1,429
28	Upper Sind Frontier	...	...	1,261	1,080	209	181
	Total for the Presidency			38,376	32,974	212,584	199,655

No. V—contd.

4

## NUMBER OF DEATHS REGISTERED.

Jains.		Christians.		Parsis.		Other Classes.		Total.		Total.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
8	10	3	7	...	...	...	1	15,887	15,328	31,215
8	5	5	10	...	1	...	...	7,560	7,331	14,891
11	17	21	16	4	2	...	...	12,105	11,263	23,368
5	4	259	222	20	24	7	6	7,759	7,270	15,029
8	9	155	129	9	2	3	...	1,404	1,103	2,507
1	2	14	22	...	3	18	19	6,887	6,570	13,457
394	271	682	588	473	441	115	92	15,097	12,287	27,384
16	8	45	63	...	...	...	...	11,235	10,352	21,587
13	8	51	47	10	9	6	6	14,676	13,247	27,923
61	53	8	7	1	...	...	...	13,298	12,370	25,668
152	113	4	8	2	2	1	...	16,448	15,793	32,241
9	5	71	84	...	...	...	...	13,463	13,846	27,309
535	538	72	78	...	...	...	...	16,111	15,520	31,631
125	148	51	45	...	...	...	...	15,931	15,194	31,125
29	31	14	17	...	...	...	...	11,350	10,680	22,030
22	19	207	209	1	...	...	...	6,342	6,169	12,511
98	102	12	6	123	107	...	...	9,174	8,730	17,904
28	29	7	6	19	27	1	...	4,265	4,321	8,586
45	45	131	157	...	...	2	...	10,004	9,616	19,620
15	16	7	8	1	...	...	...	4,051	3,944	7,995
379	416	71	67	11	7	6	5	13,879	13,102	26,981
...	...	66	35	15	15	13	6	5,770	4,683	10,453
1	...	4	3	...	...	3	...	4,716	3,598	8,314
3	2	...	...	...	...	1	1	4,363	3,574	7,937
...	...	...	...	...	...	10	8	3,527	2,647	6,174
...	...	...	...	...	...	4	3	4,790	3,977	8,767
...	...	4	2	7	...	8	4	4,222	3,331	7,553
...	...	...	...	...	...	...	...	1,470	1,261	2,731
1,966	1,851	1,964	1,836	696	640	198	151	255,784	237,107	492,891



1	2							
No.	Districts.							
			Muhammadans.		Hindus.		Jains.	
			Male.	Female.	Male.	Female.	Male.	Female.
	<i>Western Registration District.</i>							
1	East Khandesh	...	22·55	24·02	30·23	29·76	1·69	2·50
2	West Khandesh	...	15·35	17·17	26·76	26·50	3·49	2·71
3	Nasik	...	23·61	24·60	29·62	28·17	2·69	4·93
4	Thana	...	18·15	23·20	20·16	19·74	3·28	5·38
5	Bombay Suburban	...	12·95	17·10	17·07	18·57	5·91	14·24
	Kolaba	...	25·40	22·87	24·75	23·23	·87	4·11
7	Bombay City	...	25·76	45·29	18·75	28·71	22·40	43·04
	<i>Central Registration District.</i>							
8	Ahmednagar	...	27·26	24·17	32·52	30·24	2·33	1·29
9	Poona	...	26·54	30·28	30·03	27·64	1·94	1·61
10	Sholapur	...	28·56	28·90	35·65	35·22	15·19	15·53
11	Satara	...	29·78	28·50	32·57	31·05	18·76	15·70
12	Ratnagiri	...	26·18	19·92	26·73	22·19	10·99	6·09
	<i>Southern Registration District.</i>							
13	Belgaum	...	31·49	31·48	33·46	33·92	24·46	26·92
14	Dharwar	...	29·61	29·93	30·45	30·01	21·77	30·78
15	Bijapur	...	24·09	24·77	28·58	27·65	17·31	23·48
16	Kanara	...	29·81	29·01	31·36	31·61	36·97	36·61
	<i>Gujarat Registration District.</i>							
17	Surat	...	26·93	28·85	29·25	27·49	18·06	21·18
18	Broach	...	25·27	27·40	28·19	30·21	15·93	19·37
19	Kaira	...	26·91	26·79	27·10	30·17	14·02	14·39
20	Panch Mahals	...	17·79	21·49	21·99	22·61	15·69	18·67
21	Ahmedabad	...	30·15	33·81	29·53	31·74	20·65	24·34
	<i>Sind Registration District.</i>							
22	Karachi	...	17·44	16·84	23·75	33·12	...	...
23	Hyderabad	...	13·30	12·35	18·67	19·37	22·22	...
24	Thar and Parkar	...	20·23	20·87	19·95	20·64	20·00	16·94
25	Nawabshah	...	14·41	13·95	17·25	15·32	...	...
26	Larkana	...	13·70	13·80	18·56	20·59	...	...
27	Sukkur	...	12·38	11·36	21·57	20·92	...	...
28	Upper Sind Frontier	...	10·46	11·27	15·41	17·58	...	...
	Total for the Presidency	...	18·52	19·51	27·83	28·00	16·43	19·54

## RATIO OF DEATHS PER 1,000 OF POPULATION.

Christians.		Parsis.		Other Classes.		Total.		
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total.
4·60	13·51	...	...	...	1·72	29·11	28·93	29·03
9·15	22·42	...	14·08	...	...	24·42	24·18	24·30
13·32	10·50	7·85	5·00	...	...	28·92	27·69	28·31
19·42	16·93	13·05	12·58	44·03	40·00	19·98	19·72	19·85
14·71	13·42	6·31	1·71	35·71	...	16·03	17·27	16·55
22·51	45·64	...	21·58	21·50	20·54	24·65	23·25	23·93
21·18	36·53	16·92	18·16	20·89	24·74	20·08	30·96	23·84
4·10	5·63	...	...	...	...	30·47	28·63	29·82
9·91	8·63	6·42	5·96	13·22	13·39	29·32	27·18	28·27
7·50	6·67	5·88	...	...	...	34·88	34·43	34·61
3·63	9·03	7·66	8·44	32·26	...	32·17	30·70	31·43
23·06	25·16	...	...	...	...	25·40	22·02	23·66
23·93	27·20	...	...	...	...	33·24	33·37	33·31
15·36	15·58	...	...	...	...	30·15	29·92	30·04
26·07	32·32	...	...	...	...	28·01	27·30	27·66
25·71	26·14	111·11	...	...	...	31·10	31·23	31·16
12·66	8·82	24·42	17·79	...	...	27·20	25·92	26·56
4·98	5·09	18·18	22·96	·79	...	26·89	28·90	27·90
9·87	12·83	...	...	5·97	...	26·35	29·03	27·59
4·31	5·14	7·87	...	...	...	20·95	21·74	21·33
29·29	34·41	12·78	8·73	34·48	28·90	29·30	31·63	30·39
18·27	14·97	10·74	11·33	6·84	4·92	19·07	20·53	19·69
31·49	34·43	...	...	214·28	...	14·88	14·36	14·66
...	...	...	...	·24	·32	19·74	20·32	20·03
...	...	...	...	133·33	137·93	15·08	14·32	14·74
...	...	...	...	...	...	14·46	14·87	14·66
24·84	17·09	104·48	...	4·36	3·19	15·00	14·62	14·83
...	...	...	...	...	...	10·94	11·86	11·35
16·47	18·71	16·28	16·02	2·85	2·34	25·45	26·01	25·72



ANNUAL FORM No. VI.—DEATHS *registered from*  
BOMBAY PRESIDENCY  
*Details regarding Births*

1	2	3	4			
No.	Districts and Towns.	Population according to Census of 1921.	Births.			
			Male.	Female.	Total.	Birth- rate.
	A.—DISTRICTS (EXCLUDING TOWNS).					
	Western Registration District.					
1	East Khándesh ... ..	918,037	23,603	22,592	46,195	50·32
2	West Khándesh ... ..	568,809	15,265	14,731	29,996	52·73
3	Násik ... ..	705,858	19,009	18,027	37,036	52·33
4	Thána ... ..	694,658	13,106	12,050	25,156	36·21
5	Bombay Suburban ... ..	91,943	906	783	1,689	18·37
6	Kolába ... ..	533,270	11,612	10,975	22,587	42·36
	Central Registration District.					
7	Ahmednagar ... ..	667,106	17,840	16,926	34,766	52·11
8	Poona ... ..	770,334	16,716	15,239	31,955	41·48
9	Sholápur ... ..	574,999	13,593	13,167	26,760	46·54
10	Sátára ... ..	964,847	21,518	20,207	41,725	43·24
11	Ratnágiri ... ..	1,083,350	18,686	17,713	36,399	33·60
	Southern Registration District.					
12	Belgáum ... ..	871,163	18,962	18,313	37,275	42·79
13	Dhárwár ... ..	870,565	18,300	17,445	35,745	41·06
14	Bijápur ... ..	717,798	14,973	14,264	29,237	40·73
15	Kánara ... ..	350,246	6,580	6,054	12,634	36·07
	Gujarat Registration District.					
16	Surat ... ..	526,465	11,257	10,949	22,206	42·18
17	Broach ... ..	243,112	6,079	5,745	11,824	48·64
18	Káira ... ..	604,528	12,334	11,101	23,435	38·77
19	Panch Maháls ... ..	331,791	7,595	7,105	14,700	44·30
20	Ahmedabad ... ..	568,759	10,603	9,578	20,181	35·48
	Sind Registration District.					
21	Karáchi ... ..	307,576	2,569	1,939	4,508	14·66
22	Hyderabad ... ..	480,469	3,419	2,483	5,902	12·28
23	Thar and Párkar ... ..	386,343	5,065	4,109	9,174	23·75
24	Nawábsháh ... ..	402,915	5,053	3,717	8,770	21·77
25	Larkana ... ..	562,636	6,454	4,953	11,407	20·27
26	Sukkur ... ..	394,216	5,501	4,303	9,804	24·87
27	Upper Sind Frontier ... ..	230,036	3,422	2,790	6,212	27·00
	Total of Districts ...	15,421,829	310,020	287,258	597,278	38·73

*different causes in the DISTRICTS and TOWNS of the  
during the year 1927  
also shewn, column 4*

5	6	7	8	9	10	11 INJURIES— (continued on next page).  Suicide.	
Cholera.	Small- pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respira- tory Diseases.	Male.	Female.
1,114	566	...	12,852	1,840	3,519	9	6
111	51	...	6,243	550	1,726	10	5
274	361	...	8,852	1,206	3,386	7	6
167	70	5	6,179	403	2,438	22	17
3	29	4	375	179	423	3	...
246	29	95	4,837	739	2,588	12	3
815	143	35	4,384	2,140	3,481	6	6
1,171	118	...	8,306	1,479	3,704	8	10
3,052	26	51	6,024	1,473	1,799	5	3
3,907	252	679	10,764	2,306	2,629	19	16
10	286	1	7,786	1,119	5,503	9	12
7,210	220	371	5,902	2,485	3,134	29	15
3,281	29	1,218	8,523	766	2,372	29	13
2,414	19	379	7,050	1,119	2,077	29	14
180	12	297	4,326	893	967	16	2
11	228	19	4,950	296	4,668	6	9
...	44	...	3,116	144	1,924	4	6
...	4	...	5,098	712	5,977	6	12
...	15	...	4,118	199	995	4	6
62	17	...	9,361	253	2,416	2	9
..	42	...	3,489	33	371	2	2
...	25	...	5,065	19	610	2	1
...	38	...	6,144	51	836	2	4
9	97	...	5,252	15	307	2	3
11	78	...	7,387	10	130	10	5
81	19	...	4,592	18	102	3	1
...	1	...	2,495	1	21	4	4
24,129	2,819	3,154	163,470	20,448	58,103	260	190



No.	2				11				12	13
					INJURIES— <i>contd.</i>				All other causes.	Total deaths from all causes.
					Wound- ing or Acci- dent.	Snake- bite, or killed by wild beasts.	Rabies.	Total.		
	A.—DISTRICTS (EXCLUDING TOWNS).									
	<i>Western Registration District.</i>									
1	East Khandesh	...	...	...	168	38	8	229	7,758	27,878
2	West Khandesh	...	...	...	84	61	5	165	5,175	14,021
3	Nasik	...	...	...	170	47	5	235	6,391	20,705
4	Thana	...	...	...	185	160	6	390	4,182	13,834
5	Bombay Suburban	...	...	...	40	2	1	46	466	1,525
6	Kolaba	...	...	...	176	68	7	266	4,192	12,992
	<i>Central Registration District.</i>									
7	Ahmednagar	...	...	...	159	19	7	197	9,338	20,533
8	Poona	...	...	...	202	31	5	256	5,733	20,767
9	Sholapur	...	...	...	205	31	7	251	6,783	19,459
10	Satara	...	...	...	338	122	13	508	9,667	30,712
11	Ratnagiri	...	...	...	254	296	10	581	10,570	25,856
	<i>Southern Registration District.</i>									
12	Belgaum	...	...	...	333	40	5	422	9,534	29,278
13	Dharwar	...	...	...	215	57	14	328	10,156	26,673
14	Bijapur	...	...	...	180	26	4	253	6,270	19,581
15	Kanara	...	...	...	134	13	2	167	4,704	11,546
	<i>Gujarat Registration District.</i>									
16	Surat	...	...	...	123	36	7	181	2,781	13,134
17	Broach	...	...	...	106	23	3	142	1,461	6,831
18	Kaira	...	...	...	288	57	20	383	4,326	16,500
19	Panch Mahals	...	...	...	90	63	6	169	1,648	7,144
20	Ahmedabad	...	...	...	170	79	17	277	2,228	14,614
	<i>Sind Registration District.</i>									
21	Karachi	...	...	...	23	13	...	40	231	4,206
22	Hyderabad	...	...	...	40	41	...	84	184	5,987
23	Thar and Parkar	...	...	...	62	67	1	136	482	7,687
24	Nawabshah	...	...	...	47	38	2	92	204	5,976
25	Larkana	...	...	...	81	40	...	136	248	8,000
26	Sukkur	...	...	...	70	18	...	92	181	5,085
27	Upper Sind Frontier	...	...	...	31	9	...	48	30	2,596
	Total of Districts				3,974	1,495	155	6,074	114,923	393,120

## RATIO OF DEATHS PER 1,000 OF POPULATION.

Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respiratory Diseases.	Injuries.	All other causes.	From all causes.	
								For the year.	Mean of previous five years.
1·21	·62	...	14·00	2·00	3·83	·25	8·45	30·37	32·75
·20	·09	...	10·98	·96	3·03	·29	9·10	24·65	27·80
·39	·51	...	12·54	1·71	4·80	·33	9·05	29·33	30·32
·24	·10	·01	8·89	·58	3·51	·56	6·02	19·91	23·19
·03	·32	·04	4·08	1·95	4·60	·50	5·07	16·59	18·40
·46	·05	·18	9·07	1·38	4·85	·50	7·87	24·36	27·25
1·22	·21	·05	6·57	3·21	5·23	·29	14·00	30·78	29·96
1·52	·15	...	10·79	1·92	4·81	·33	7·44	26·96	26·70
5·31	·04	·09	10·47	2·56	3·13	·44	11·80	33·84	28·51
4·05	·26	·70	11·16	2·39	2·72	·53	10·02	31·83	27·25
·01	·26	...	7·19	1·04	5·08	·54	9·75	23·87	22·28
8·28	·25	·43	6·78	2·85	3·60	·48	10·94	33·61	26·65
3·77	·03	1·40	9·80	·88	2·72	·38	11·67	30·64	31·56
3·36	·03	·53	9·82	1·56	2·89	·35	8·74	27·28	26·59
·51	·03	·85	12·35	2·55	2·76	·48	13·43	32·97	31·14
·02	·43	·04	9·40	·56	8·87	·34	5·28	24·94	27·15
·00	·18	·00	12·82	·59	7·91	·58	6·01	28·09	33·08
·00	·01	·00	8·43	1·18	9·88	·63	7·16	27·29	26·07
·00	·05	·00	12·41	·60	2·99	·51	4·97	21·53	21·20
·11	·03	·00	16·46	·44	4·24	·49	3·92	25·69	25·00
...	·14	...	11·34	·11	1·21	·13	·75	13·68	10·90
...	·05	...	10·54	·04	1·27	·17	·38	12·45	12·56
...	·10	...	15·90	·13	2·16	·35	1·25	19·89	15·09
·03	·24	·	13·05	·04	·76	·23	·48	14·83	29·44
·02	·14	...	13·13	·02	·23	·24	·44	14·22	13·45
·21	·05	...	11·65	·04	·26	·23	·46	12·90	16·24
...	·00	...	10·85	·00	·09	·21	·13	11·28	12·15
1·57	·18	·20	10·60	1·33	3·77	·39	7·45	25·49	24·98



1	2			3	4			
No.	Districts and Towns.			Population according to Census of 1921.	Births.			
					Male.	Female.	Total.	Birth-rate.
B.—TOWNS.								
East Khándesh District.								
1	Jalgaon	...	...	23,696	361	274	635	26·79
2	Bhusáwal	...	...	24,933	310	285	595	23·86
3	Chopda	...	...	16,930	223	209	432	25·51
4	Dharangaon	...	...	14,824	295	237	532	29·14
5	Párola	...	...	12,079	248	240	488	40·40
6	Amalner	...	...	17,063	183	170	353	20·88
7	Erandol	...	...	12,489	267	228	495	39·64
8	Nasirabad	...	...	12,188	331	302	633	51·94
9	Chálisgaon	...	...	11,990	239	172	411	34·28
10	Yawal	...	...	10,888	174	144	318	29·21
West Khandesh District.								
11	Dhulia	...	...	30,061	651	595	1,246	41·44
12	Nandurbár	...	...	13,842	266	250	516	37·28
Nasik District.								
13	Násik	...	...	42,715	619	562	1,181	27·65
14	Yeola	...	...	13,911	198	190	388	27·89
15	Málegaon	...	...	23,711	390	298	688	29·02
16	Igatpuri	...	...	9,977	121	125	246	24·60
17	Manmád	...	...	11,866	137	128	265	22·34
18	Trimbak	...	...	4,538	68	71	139	30·84
19	Deoláli Cantonment	...	...	12,640	11	7	18	1·42
Thana District.								
20	Thána	...	...	22,116	160	184	344	15·55
21	Bhiwandi	...	...	12,188	174	176	350	28·72
22	Kalyán	...	...	17,573	245	224	469	26·69
23	Bassein	...	...	10,364	95	77	172	16·59
Bombay Suburban District.								
24	Bándra	...	...	28,738	353	324	677	23·55
25	Kurla	...	...	26,059	258	215	473	18·15
26	Santa Cruz Cantonment	...	...	4,701	5	1	6	1·27

No. VI—*contd.*

5	6	7	8	9	10	11 INJURIES (continued on next page).	
Cholera.	Small- pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respira- tory Diseases.	Suicide.	
						Male.	Female.
11	24	...	231	48	108	...	...
64	21	...	197	31	33	...	...
2	...	...	164	5	28	...	...
5	...	...	60	28	68	...	...
14	21	...	114	7	57	...	...
28	...	1	91	14	59	...	...
...	2	...	94	20	49	...	...
52	22	...	166	53	76	...	...
8	4	...	147	22	49	...	...
...	2	...	52	9	43	...	...
4	6	...	114	36	171	1	...
3	...	...	81	9	41	...	...
11	56	...	170	40	425	1	1
...	...	...	196	6	43	...	...
...	13	...	197	96	92	...	...
1	...	...	109	3	25	...	...
4	30	...	60	8	45	...	...
...	...	...	16	1	14	...	...
2	...	...	...	4	19	...	...
1	1	...	198	19	97	2	2
...	...	13	118	16	76	...	...
5	4	...	45	26	117	...	...
16	...	...	31	5	44	...	...
1	11	10	48	30	93	...	...
7	11	17	108	48	139	...	...
...	...	...	...	...	2	...	...



1	2	11 INJURIES— <i>contd.</i>				12	13
No.	Districts and Towns.	Wound- ing or Acci- dent.	Snake- bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total deaths from all causes.
<b>B.—TOWNS.</b>							
<i>East Khandesh District.</i>							
1	Jalgaon ... ..	9	1	...	10	184	616
2	Bhusawal ... ..	5	...	...	5	111	462
3	Chopda ... ..	3	...	...	3	47	249
4	Dharangaon ... ..	5	...	...	5	142	308
5	Parola ... ..	2	...	...	2	57	272
6	Amalner ... ..	10	1	...	11	42	246
7	Erandol ... ..	2	...	1	3	100	268
8	Nasirabad ... ..	4	...	...	4	130	503
9	Chalisgaon ... ..	10	...	...	10	17	257
10	Yawal ... ..	2	...	...	2	48	156
<i>West Khandesh District.</i>							
11	Dhulia ... ..	6	...	...	7	226	564
12	Nandurbar ... ..	4	1	1	6	166	306
<i>Nasik District.</i>							
13	Nasik ... ..	15	1	2	20	568	1,275
14	Yeola ... ..	3	...	...	3	115	363
15	Malegaon ... ..	5	...	1	6	125	529
16	Igatpuri ... ..	3	...	...	3	47	188
17	Manmad ... ..	1	...	...	1	47	195
18	Trimbak ... ..	2	...	...	2	31	64
19	Deolali Cantonment ... ..	1	...	...	1	23	49
<i>Thana District.</i>							
20	Thana ... ..	13	...	...	17	49	382
21	Bhiwandi ... ..	5	1	...	6	66	295
22	Kalyan ... ..	5	...	...	5	135	337
23	Bassein ... ..	3	...	...	3	82	181
<i>Bombay Suburban District.</i>							
24	Bandra ... ..	8	3	...	11	213	417
25	Kurla ... ..	3	2	1	9	222	561
26	Santa Cruz Cantonment ... ..	...	...	...	...	2	4

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## RATIO OF DEATHS PER 1,000 OF POPULATION.

Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes.	
								For the year.	Mean of previous five years.
·46	1·01	...	9·75	2·03	4·55	·42	7·77	26·00	20·51
2·57	·84	...	7·90	1·24	1·32	·20	4·45	18·53	21·86
·12	...	...	9·69	·29	1·65	·18	2·78	14·71	22·38
·34	...	...	4·05	1·89	4·59	·34	9·58	20·78	35·15
1·16	1·74	...	9·44	·58	4·72	·17	4·72	22·52	33·45
1·64	...	·06	5·33	·82	3·45	·64	2·46	14·41	16·99
...	·16	...	7·53	1·61	3·92	·24	8·01	21·46	33·79
4·27	1·81	...	13·62	4·35	6·23	·33	10·66	41·27	36·18
·67	·33	...	12·27	1·83	4·09	·81	1·42	21·43	23·43
...	·18	...	4·77	·83	3·95	·18	4·41	14·33	16·66
·13	·20	...	3·79	1·19	5·69	·23	7·52	18·76	23·35
·22	...	...	5·85	·65	2·96	·43	11·99	22·10	25·21
·26	1·31	...	3·98	·93	9·95	·47	12·95	29·85	30·88
...	...	...	14·09	·43	3·09	·22	8·26	26·09	34·43
...	·55	...	8·31	4·05	3·88	·25	5·27	22·31	26·99
·10	...	...	10·93	·30	2·50	·30	4·71	18·84	16·24
·34	2·53	...	5·05	·67	3·80	·09	3·95	16·43	12·30
...	...	...	3·53	·22	3·03	·44	6·83	14·10	18·95
·16	...	...	...	·32	1·50	·08	1·81	3·87	6·66
·04	·04	...	8·95	·86	4·39	·77	2·22	17·27	21·79
..	...	1·07	9·68	1·31	6·24	·49	5·41	24·20	30·11
·28	·23	...	2·56	1·48	6·66	·28	7·68	19·18	24·53
1·54	...	...	2·99	·48	4·24	·29	7·91	17·46	24·80
·04	·38	·35	1·67	1·04	3·24	·38	7·41	14·51	16·66
·27	·42	·65	4·15	1·84	5·33	·35	8·52	21·53	20·15
...	...	...	...	...	·42	...	·43	·85	1·49



1	2	3	4				
No.	Districts and Towns.	Population according to Census of 1921.	Births.				
			Male.	Female.	Total.	Birth-rate.	
B.—TOWNS— <i>contd.</i>							
<i>Kolaba District.</i>							
27	Alibág ... ..	5,253	79	67	146	27·79	
28	Panwel ... ..	8,622	106	81	187	21·68	
29	Mahád ... ..	7,192	63	52	115	15·99	
30	Uran ... ..	8,135	53	55	108	13·27	
31	City of Bombay ... ..	1,148,815	10,816	10,486	21,302	18·54	
<i>Ahmednagar District.</i>							
32	Ahmednagar ... ..	33,138	431	402	833	25·14	
33	Sangamner ... ..	12,737	196	189	385	30·23	
34	Ahmednagar Cantonment ... ..	10,997	136	124	260	23·64	
<i>Poona District.</i>							
35	Poona City ... ..	133,122	1,355	1,225	2,580	19·38	
36	Poona Suburban ... ..	13,971	50	43	93	6·66	
37	Báramati ... ..	11,905	205	190	395	33·18	
38	Khed ... ..	7,013	124	91	215	30·66	
39	Lonávla ... ..	10,471	129	111	240	22·92	
40	Junnár ... ..	7,376	139	137	276	37·41	
41	Poona Cantonment ... ..	25,498	49	58	107	4·20	
42	Kirkee do. ... ..	7,991	86	61	147	18·40	
<i>Sholapur District.</i>							
43	Sholápur ... ..	119,347	2,767	2,287	5,054	42·35	
44	Bársi ... ..	22,074	395	344	739	33·48	
45	Pandharpur ... ..	25,210	488	432	920	36·49	
<i>Satara District.</i>							
46	Sátara ... ..	22,454	256	189	445	19·82	
47	Wái ... ..	10,208	165	137	302	29·58	
48	Karád ... ..	11,255	135	132	267	23·72	
49	Ashta ... ..	9,016	159	114	273	30·28	
50	Islámpur ... ..	7,915	144	114	258	32·60	
<i>Ratnagiri District.</i>							
51	Ratnágiri ... ..	18,286	267	221	488	26·69	
52	Vengurla ... ..	19,126	279	280	559	29·23	
53	Málwan ... ..	22,213	294	241	535	24·09	
54	Chiplun ... ..	11,005	164	139	303	27·53	

No. VI—*contd.*

5	6	7	8	9	10	11 INJURIES.	
Cholera.	Small- pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respira- tory Diseases.	Suicide.	
						Male.	Female.
...	1	1	26	8	11	...	...
7	1	8	26	4	52	...	...
...	...	...	14	38	29	1	...
...	...	17	21	3	24	...	...
80	841	207	2,485	1,452	11,464	69	13
...	16	...	127	31	239	2	...
5	...	...	42	9	22	...	...
...	...	...	40	16	69	...	...
20	436	...	1,113	327	1,794	6	8
...	7	...	109	20	53	...	...
20	4	...	107	24	33	1	1
19	1	...	21	1	28	...	...
...	3	...	99	16	76	...	...
...	...	...	45	14	88	...	...
1	4	...	89	18	69	1	...
2	1	...	12	23	113	1	...
110	25	5	1,774	226	463	1	2
127	...	...	254	30	52	2	1
213	...	1	287	77	205	5	2
28	2	...	168	53	89	...	1
3	...	...	50	14	50	...	...
9	1	5	43	4	11	...	1
104	...	...	33	30	9	...	...
19	20	...	30	14	43	...	...
...	9	...	62	13	82	...	...
1	1	5	94	17	91	...	1
...	8	...	72	65	68	1	...
...	1	...	87	7	44	...	...



1	2				11 INJURIES— <i>contd.</i>				12	13
No.	Districts and Towns.				Wound- ing or Acci- dent.	Snake- bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total deaths from all causes.
	B.—TOWNS— <i>contd.</i>									
	<i>Kolaba District.</i>									
27	Alibag	...	...	...	2	1	...	3	44	94
28	Panwel	...	...	...	3	...	...	3	63	164
29	Mahad	...	...	...	...	...	...	1	34	116
30	Uran	...	...	...	1	...	...	1	25	91
31	City of Bombay	...	...	...	565	1	...	648	10,207	27,384
	<i>Ahmednagar District.</i>									
32	Ahmednagar	...	...	...	9	...	...	11	217	641
33	Sangamner	...	...	...	...	...	...	...	126	205
34	Ahmednagar Cantonment	...	...	...	1	1	...	2	81	208
	<i>Poona District.</i>									
35	Poona City	...	...	...	40	...	...	54	1,747	5,491
36	Poona Suburban	...	...	...	5	...	...	5	62	256
37	Baramati	...	...	...	7	...	...	9	115	312
38	Khed	...	...	...	1	1	...	2	54	126
39	Lonavla	...	...	...	13	1	1	15	51	260
40	Junnar	...	...	...	4	...	...	4	63	214
41	Poona Cantonment	...	...	...	...	...	...	1	70	252
42	Kirkee do.	...	...	...	...	...	...	1	93	245
	<i>Sholapur District.</i>									
43	Sholapur	...	...	...	52	7	1	63	1,426	4,092
44	Barsi	...	...	...	7	...	1	11	353	827
45	Pandharpur	...	...	...	12	1	...	20	487	1,290
	<i>Satara District.</i>									
46	Satara	...	...	...	15	1	1	18	295	653
47	Wai	...	...	...	3	2	...	5	86	208
48	Karad	...	...	...	1	1	...	3	124	200
49	Ashta	...	...	...	3	...	...	3	96	275
50	Islampur	...	...	...	5	...	...	5	62	193
	<i>Ratnagiri District.</i>									
51	Ratnagiri	...	...	...	11	...	...	11	170	347
52	Vengurla	...	...	...	8	...	...	9	240	458
53	Malwan	...	...	...	8	3	1	13	209	435
54	Chiplun	...	...	...	4	1	...	5	69	213

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## RATIO OF DEATHS PER 1,000 OF POPULATION.

Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respiratory Diseases.	Injuries.	All other causes.	From all causes	
								For the year.	Mean of previous five years.
...	·19	·19	4·96	1·52	2·09	·57	8·37	17·89	21·32
·81	·12	·93	3·02	·46	6·03	·35	7·30	19·02	21·22
...	...	...	1·95	5·28	4·03	·14	4·73	16·13	18·35
...	...	2·09	2·59	·36	2·95	·12	3·07	11·18	13·89
·07	·73	·18	2·16	1·26	9·98	·56	8·88	23·84	30·68
...	·48	...	3·83	·93	7·21	·33	6·56	19·34	19·86
·47	...	...	3·29	·71	1·73	...	9·90	16·10	16·82
...	...	...	3·64	1·45	6·28	·18	7·36	18·91	17·95
·15	3·28	...	8·36	2·46	13·47	·41	13·12	41·25	40·97
...	·50	...	7·80	1·43	3·79	·36	4·44	18·32	21·76
1·68	·34	...	8·99	2·02	2·77	·75	9·66	26·21	23·28
2·71	·14	...	2·99	·14	3·99	·29	7·71	17·97	19·31
...	·29	...	9·46	1·53	7·26	1·43	4·87	24·84	26·32
...	...	...	6·10	1·90	11·93	·54	8·54	29·01	20·93
·04	·16	...	3·49	·71	2·71	·04	2·74	9·89	13·79
·25	·12	...	1·50	2·88	14·14	·12	11·65	30·66	31·44
·92	·21	·04	14·87	1·89	3·88	·53	11·95	34·29	35·70
5·75	...	...	11·50	1·36	2·36	·50	15·99	37·46	39·58
8·45	...	·04	11·38	3·06	8·13	·79	19·32	51·17	53·92
1·25	·09	...	7·48	2·36	3·96	·80	13·14	29·08	30·43
·29	...	...	4·90	1·37	4·90	·49	8·43	20·38	21·65
·80	·09	·44	3·82	·35	·98	·27	11·02	17·77	17·53
11·54	...	...	3·66	3·33	1·00	·33	10·64	30·50	16·26
2·40	2·53	...	3·79	1·77	5·43	·63	7·83	24·38	20·49
...	·49	...	3·39	·71	4·48	·60	9·30	18·97	15·52
·05	·05	·26	4·92	·89	4·75	·47	12·55	23·94	24·94
...	·36	...	3·24	2·92	3·06	·59	9·41	19·58	19·76
...	·09	...	7·91	·63	4·00	·45	6·27	19·35	17·85



1	2				3	4			
No.	Districts and Towns.				Population according to Census of 1921.	Births.			
						Male.	Female.	Total.	Birth- rate.
B.—TOWNS— <i>contd.</i>									
<i>Belgaum District.</i>									
55	Belgaum	...	...	...	36,214	529	507	1,036	28·61
56	Gokak	...	...	...	9,989	190	179	369	36·94
57	Athni	...	...	...	13,538	167	155	322	23·78
58	Nipani	...	...	...	11,878	209	236	445	37·48
59	Belgaum Cantonment	...	...	...	6,880	37	53	90	13·08
<i>Dharwar District.</i>									
60	Dharwar	...	...	...	34,327	568	545	1,113	32·42
61	Hubli	...	...	...	69,140	1,107	1,022	2,129	30·79
62	Gadag-Bettigeri	...	...	...	41,158	868	783	1,651	40·11
63	Ranebennur	...	...	...	13,930	322	295	617	44·29
64	Nawalgund	...	...	...	7,089	114	94	208	29·34
<i>Bijapur District.</i>									
65	Bijapur	...	...	...	32,471	490	429	919	28·30
66	Bagalkot	...	...	...	19,471	390	460	850	43·65
67	Guledgud	...	...	...	14,760	345	328	673	45·60
68	Ilkal	...	...	...	11,856	255	232	487	41·08
<i>Kanara District.</i>									
69	Karwar	...	...	...	14,463	215	165	380	26·27
70	Kumta	...	...	...	14,291	174	155	329	23·02
71	Gokarn	...	...	...	8,307	110	126	236	28·41
72	Honawar	...	...	...	7,035	167	163	330	46·91
73	Bhatkal	...	...	...	7,134	102	106	208	29·16
<i>Surat District.</i>									
74	Surat	...	...	...	117,424	2,384	2,231	4,615	39·30
75	Bulsar	...	...	...	19,681	305	249	554	28·15
76	Rander	...	...	...	10,547	157	126	283	26·83
<i>Broach District.</i>									
77	Broach	...	...	...	42,626	956	906	1,862	43·68
78	Jambusar	...	...	...	10,217	239	263	502	49·13
79	Ankleshwar	...	...	...	11,756	237	224	461	39·21

No. VI—*contd.*

5	6	7	8	9	10	11 INJURIES.	
Cholera.	Small- pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respira- tory Diseases.	Suicide.	
						Male.	Female.
63	10	192	227	53	209	2	...
65	32	...	44	35	34	1	1
111	...	2	71	14	56	...	...
126	...	...	113	6	67	...	...
...	...	4	52	8	19	...	...
44	...	6	170	38	197	...	...
122	...	1	277	30	265	1	...
138	...	190	384	38	279	3	1
16	...	179	37	13	99	...	...
12	...	...	33	9	38	...	...
70	...	25	109	30	118	2	...
126	1	...	143	35	92	1	...
33	...	1	184	...	32	3	1
51	...	...	57	4	78	3	1
1	...	...	58	7	26	...	...
...	...	2	67	76	45	...	...
...	...	...	44	20	31	...	...
...	...	...	30	20	13	1	...
...	1	...	62	24	23	...	...
...	504	...	386	235	1,495	1	2
...	17	29	39	11	138	...	...
...	47	...	70	8	75	...	...
...	...	...	236	33	317	2	...
...	...	...	87	1	...	...	...
...	...	...	226	1	51	1	...



1	2	11				12	13
No.	Districts and Towns.	INJURIES— <i>contd.</i>				All other causes.	Total deaths from all causes.
		Wound- ing or acci- dent.	Snake- bite, or killed by wild beasts.	Rabies.	Total.		
	B.—TOWNS— <i>contd.</i>						
	<i>Belgaum District.</i>						
55	Belgaum ... ..	14	...	...	16	491	1,261
56	Gokak ... ..	2	...	...	4	85	299
57	Athni ... ..	2	...	...	2	32	288
58	Nipani ... ..	6	...	...	6	63	381
59	Belgaum Cantonment ... ..	2	...	...	2	39	124
	<i>Dharwar District.</i>						
60	Dharwar ... ..	20	3	...	23	384	862
61	Hubli ... ..	21	...	2	24	543	1,262
62	Gadag-Bettigeri ... ..	14	...	1	19	509	1,557
63	Ranebennur ... ..	5	...	1	6	260	610
64	Nawalgund ... ..	1	...	2	3	66	161
	<i>Bijapur District.</i>						
65	Bijapur ... ..	16	1	1	20	292	664
66	Bagalkot ... ..	6	...	5	12	313	722
67	Guledgud ... ..	6	...	...	10	242	502
68	Ilkal ... ..	3	...	...	7	364	561
	<i>Kanara District.</i>						
69	Karwar ... ..	3	1	...	4	110	206
70	Kumta ... ..	2	...	...	2	86	278
71	Gokarn ... ..	4	...	...	4	77	176
72	Honawar ... ..	1	...	...	2	70	135
73	Bhatkal ... ..	2	...	...	2	58	170
	<i>Surat District.</i>						
74	Surat ... ..	55	1	2	61	1,464	4,145
75	Bulsar ... ..	2	...	...	2	137	373
76	Rander ... ..	2	...	...	2	50	252
	<i>Broach District.</i>						
77	Broach ... ..	46	1	...	49	550	1,185
78	Jambusar ... ..	1	3	...	4	36	239
79	Ankleshwar ... ..	4	...	...	5	48	331

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## RATIO OF DEATHS PER 1,000 OF POPULATION.

Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respiratory Diseases.	Injuries.	All other causes.	From all causes.	
								For the year.	Mean of previous five years.
1.74	.28	5.30	6.27	1.46	5.77	.44	13.56	34.82	28.44
6.51	3.20	...	4.40	3.50	3.40	.40	8.51	29.93	28.73
8.20	...	.15	5.24	1.03	4.14	.15	2.36	21.27	17.73
10.61	...	...	9.51	.51	5.64	.51	5.30	32.08	18.61
...	...	.58	7.56	1.17	2.76	.29	5.67	18.02	11.05
1.28	...	.17	4.95	1.11	5.74	.67	11.19	25.11	31.68
1.76	...	.01	4.01	.43	3.83	.35	7.85	18.25	27.18
3.35	...	4.62	9.33	.92	6.78	.46	12.37	37.83	30.76
1.15	...	12.85	2.66	.93	7.11	.43	18.66	43.79	38.26
1.69	...	...	4.66	1.27	5.36	.42	9.32	22.71	22.99
2.16	...	.77	3.36	.92	3.63	.61	8.99	20.44	25.59
6.47	.05	...	7.35	1.80	4.72	.62	16.08	37.08	33.18
2.24	...	.07	12.47	...	2.17	.68	16.39	34.01	35.16
4.30	...	...	4.81	.34	6.58	.59	30.70	47.32	37.48
.07	...	...	4.01	.48	1.80	.28	7.61	14.24	14.94
...	...	.14	4.69	5.32	3.15	.14	6.02	19.45	16.66
...	...	...	5.30	2.41	3.73	.48	9.27	21.19	21.19
...	...	...	4.26	2.84	1.85	.28	9.95	19.19	21.32
...	.14	...	8.69	3.36	3.22	.28	8.13	23.83	21.02
...	4.29	...	3.29	2.00	12.73	.52	12.47	35.30	35.61
...	.86	1.47	1.99	.56	7.01	.10	6.96	18.95	17.55
...	4.46	...	6.64	.76	7.11	.18	4.74	23.89	23.21
...	...	...	5.53	.78	7.44	1.15	12.90	27.80	30.06
...	...	...	8.52	.09	10.87	.39	3.52	23.39	31.30
...	...	...	19.23	.08	4.34	.43	4.08	28.16	29.62



1	2	3	4			
No.	Districts and Towns.	Population according to Census of 1921.	Births.			
			Male.	Female.	Total.	Birth- rate.
B.—TOWNS— <i>contd.</i>						
<i>Kaira District.</i>						
80	Kaira	8,277	136	121	257	31·05
81	Mehmedabad	6,236	133	140	273	43·78
82	Nadiad	31,919	596	496	1,092	34·21
83	Borsad	12,113	336	330	666	54·98
84	Anand	11,024	174	155	329	29·84
85	Umreth	14,024	329	324	653	46·56
86	Dakore	7,990	137	110	247	30·92
87	Kapadvanj	14,794	290	277	567	38·32
<i>Panch Mahals District.</i>						
88	Godhra	26,969	779	696	1,475	54·69
89	Dohad	16,071	285	283	568	35·34
<i>Ahmedabad District.</i>						
90	Ahmedabad	270,599	5,939	5,633	11,577	42·78
91	Dhandhuka	8,056	198	169	367	45·56
92	Viramgaon	26,252	344	305	649	24·72
93	Dholka	12,513	306	272	578	46·19
94	Ahmedabad Cantonment.	1,745	10	12	22	12·61
<i>Karachi District.</i>						
95	Karachi	199,014	5,186	5,031	10,217	51·33
96	Tatta	8,470	79	65	144	16·99
97	Kotri	9,072	58	42	100	11·02
98	Karachi Cantonment	6,525	91	102	193	29·58
<i>Hyderabad District.</i>						
99	Hyderabad	72,625	1,551	1,472	3,023	41·63
100	Halla	5,757	58	40	98	17·20
101	Matiari	4,638	47	32	79	17·03
102	Hyderabad Cantonment	3,760	13	12	25	6·65
<i>Thar and Parkar District.</i>						
103	Umarkot	4,199	46	32	78	18·57
104	Mirpurkhas	5,765	44	30	74	12·83

No. VI—*contd.*

5	6	7	8	9	10	11 INJURIES.	
Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respira- tory. Diseases.	Suicide.	
						Male.	Female.
...	...	...	84	8	81	...	...
...	...	...	84	10	34	...	...
...	...	...	424	5	302	...	...
...	...	...	181	39	33	...	...
...	...	...	187	5	20	...	...
...	...	...	89	4	247	...	...
...	...	...	89	17	88	...	...
...	...	...	191	12	84	...	...
...	5	...	421	3	44	...	...
...	...	...	242	3	5	...	...
6	5	...	3,026	408	3,852	12	4
...	3	...	109	8	70	...	...
...	1	...	453	13	316	...	...
...	...	...	232	4	59	...	...
...	...	...	21	2	4	...	...
1	10.	...	1,118	413	2,105	...	1
...	...	...	130	...	...	...	...
...	...	...	83	10	59	...	...
...	...	...	36	1	7	...	...
...	9	...	433	84	727	...	...
...	...	...	40	...	8	...	...
...	1	...	69	1	11	...	...
...	...	...	24	1	9	...	...
...	...	...	33	3	49	...	...
...	10	...	70	1	31	...	...



1	2	11				12	13
No.	Districts and Towns.	INJURIES—contd.				All other causes.	Total deaths from all causes.
		Wound- ing or acci- dent.	Snake- bite, or killed by wild beasts.	Rabies.	Total.		
B.--TOWNS--contd.							
Kaira District.							
80	Kaira	6	...	...	6	50	229
81	Mehmedabad	8	1	..	9	55	192
82	Nadiad	17	...	...	17	235	983
83	Borsad	...	...	...	...	124	377
84	Anand	6	...	...	6	33	251
85	Umreth	8	...	...	8	105	453
86	Dakore	7	5	...	12	53	259
87	Kapadvanj	5	...	...	5	84	376
Panch Mahals District.							
88	Godhra	3	...	...	3	77	553
89	Dohad	4	...	...	4	44	298
Ahmedabad District.							
90	Ahmedabad	138	2	5	161	3,413	10,871
91	Dhandhuka	2	...	...	2	47	239
92	Viramgaon	4	...	...	4	59	846
93	Dholka	6	1	...	7	81	383
94	Ahmedabad Cantonment	...	...	...	...	1	28
Karachi District.							
95	Karachi	79	2	...	82	2,143	5,872
96	Tatta	1	1	...	2	6	138
97	Kotri	...	...	...	...	13	165
98	Karachi Cantonment	1	...	...	1	27	72
Hyderabad District.							
99	Hyderabad	29	2	...	31	865	2,149
100	Halla	...	1	...	1	2	51
101	Matlari	...	...	...	...	5	87
102	Hyderabad Cantonment	...	...	...	...	6	40
Thar and Parkar District.							
103	Umarkot	2	1	...	3	39	127
104	Mirpurkhas	3	1	1	5	6	123

No. VI—*contd.*

14

## RATIO OF DEATHS PER 1,000 OF POPULATION.

Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes.	
								For the year.	Mean of previous five years.
.....	...	...	10·15	·97	9·79	·72	6·04	27·67	23·24
.....	...	...	13·47	1·60	5·46	1·44	8·82	30·79	33·55
.....	...	...	13·28	·16	9·47	·53	7·36	30·80	34·83
.....	...	...	14·94	3·22	2·72	...	10·24	31·12	36·69
.....	...	...	16·96	·46	1·81	·54	3·00	22·77	23·00
.....	...	...	6·35	·28	17·61	·57	7·49	32·30	34·92
.....	...	...	11·15	2·13	11·01	1·50	6·63	32·42	35·49
.....	...	...	12·91	·81	5·67	·34	5·68	25·41	30·36
.....	·19	...	15·61	·11	1·63	·11	2·85	20·50	17·63
.....	...	...	15·06	·18	·31	·25	2·74	18·54	14·10
·02	·02	...	11·19	1·51	14·23	·59	12·61	40·17	40·06
.....	·37	...	13·53	1·00	8·68	·25	5·84	29·67	29·57
.....	·04	...	17·26	·49	12·04	·15	2·25	32·23	28·87
.....	...	...	18·54	·32	4·72	·56	6·47	30·61	28·39
.....	...	...	12·04	1·15	2·29	...	·57	16·05	19·60
.....	·05	...	5·62	2·08	10·57	·41	10·77	29·50	31·24
.....	...	...	15·34	.....	...	·24	·71	16·29	18·53
.....	...	...	9·15	1·10	6·50	...	1·43	18·18	15·87
.....	...	...	5·52	·15	1·07	·15	4·14	11·03	11·34
.....	·13	...	5·96	1·16	10·01	·43	11·91	29·60	30·96
.....	...	...	6·94	.....	1·39	·17	·35	8·85	
.....	·22	...	14·88	·22	2·37	...	1·07	18·76	19·18
.....	...	...	6·38	·27	2·39	...	1·59	10·63	7·23
.....	...	...	7·85	·71	11·70	·71	9·29	30·26	25·24
.....	1·72	...	12·14	·17	5·39	·87	1·05	21·34	23·93



## ANNUAL FORM

1	2	3	4			
No.	Districts and Towns.	Population according to Census of 1921.	Births.			
			Male.	Female.	Total.	Birth- rate.
	B.—TOWNS—concl'd.					
	<i>Nawabshah District.</i>					
105	Nawabshah ...	2,771	53	29	82	29·59
106	Tando Adam ...	12,966	130	95	225	17·36
	<i>Larkana District.</i>					
107	Larkana ...	17,700	362	329	691	38·48
108	Kambar ...	7,613	111	106	217	28·50
109	Ratodero ...	5,565	141	111	252	45·28
110	Sehwan ...	4,423	56	31	87	19·67
	<i>Sukkur District.</i>					
111	Sukkur ...	42,046	729	617	1,346	32·01
112	Shikarpur ...	55,347	981	769	1,750	31·61
113	Rohri ...	11,378	167	162	329	28·91
114	Garhi Yasin ...	6,375	121	96	217	34·04
	<i>Upper Sind Frontier District.</i>					
115	Jacobabad ...	10,578	109	80	189	17·86
	Total of Towns ...	3,743,785	56,674	52,333	109,007	29·12
	Total for the Presidency ...	19,165,614	366,694	339,591	706,285	36·85

## No. VI—concl'd.

5	6	7	8	9	10	11 INJURIES.	
Cholera.	Small- pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respira- tory. Diseases.	Suicide.	
						Male.	Female.
.....	.....	.....	49	.. ..	3	.....	...
.....	2	.....	109	1	24	.....	...
.....	3	.....	133	8	79	.....	...
.....	.....	.....	114	1	10	.....	...
.....	.....	.....	103	.....	2	.....	...
.....	1	.....	25	1	15	1	...
16	.....	.....	494	9	38	.. ..	...
1	.....	1	500	16	113	1	...
14	.....	.....	117	18	29	.. ..	...
.....	.....	.....	119	1	5	.....	...
.....	.....	.....	98	2	5	.....	...
2,024	2,272	922	23,073	4,999	29,860	131	45
26,153	5,091	4,076	186,543	25,447	87,963	391	235



## ANNUAL FORM

1	2	11				12	13
No.	Districts and Towns.	INJURIES— <i>contd.</i>				All other causes.	Total deaths from all causes.
		Wound- ing or acci- dent.	Snake- bite or killed by wild beasts.	Rabies.	Total.		
	<i>B.—TOWNS—concl'd.</i>						
	<i>Nawabshah District.</i>						
105	Nawabshah ...	3	1	...	4	2	58
106	Tando Adam ...	2	...	...	2	2	140
	<i>Larkana District.</i>						
107	Larkana ...	9	...	...	9	220	452
108	Kambar ...	1	...	...	1	14	140
109	Ratodero ...	3	...	...	3	5	113
110	Sehwan ...	...	...	...	1	19	62
	<i>Sukkur District.</i>						
111	Sukkur ...	15	...	...	15	101	673
112	Shikarpur ...	13	1	1	16	802	1,449
113	Rohri ...	5	...	...	5	32	215
114	Garhi Yasin ...	1	...	...	1	5	131
	<i>Upper Sind Frontier District.</i>						
115	Jacobabad ...	1	...	...	1	29	135
	Total of Towns ...	1,531	60	32	1,799	34,822	99,771
	Total for the Presidency ...	5,505	1,555	187	7,873	149,745	492,891

No. VI—concl'd.

14

## RATIO OF DEATHS PER 1,000 OF POPULATION.

Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes.	
								For the year.	Mean of previous five years.
.....	..	...	17·69	.....	1·08	1·44	·72	20·93	21·14
.....	·16	...	8·40	·07	1·83	·16	·16	10·78	11·10
.....	·17	...	7·50	·45	4·47	·51	12·43	25·53	28·98
.....	...	...	14·98	·13	1·31	·13	1·83	18·38	16·81
.....	...	...	18·51	.....	·36	·54	·89	20·30	25·53
.....	·23	...	5·65	·23	3·39	·23	4·29	14·02	19·89
·38	...	...	11·75	·21	·90	·36	2·40	16 00	17·57
·02	...	·02	9·03	·29	2·04	·29	14·49	26·18	30·44
1·23	...	...	10·28	1·58	2·55	·44	2·81	18·89	20·82
.....	...	...	18·66	·16	·78	·16	·78	20·54	25·56
.....	...	...	9 26	·19	·47	·09	2·75	12·76	18·81
·54	·61	·25	6·16	1·33	7·98	·48	9·30	26·65	29·54
1·36	·27	·21	9·73	1·33	4·59	·41	7·81	25·72	25·87



ANNUAL FORM No. VI (a)—DEATHS registered from certain  
during the

1	2	3	4		5		
No.	Districts and Towns.	Population according to Census of 1921.	Enteric Fever.		Measles.		
			Deaths.	Ratio.	Deaths.	Ratio.	
A.—DISTRICTS (EXCLUDING TOWNS.)							
Western Registration District.							
1	East Khándesh ... ..	918,037	...	...	234	·25	
2	West Khándesh ... ..	568,809	...	...	151	·27	
3	Násik ... ..	705,858	...	...	38	·05	
4	Thána ... ..	694,658	...	...	16	·02	
5	Bombay Suburban ... ..	91,943	...	...	3	·03	
6	Kolaba ... ..	533,270	...	...	59	·11	
Central Registration District.							
7	Ahmednagar ... ..	667,106	124	·19	296	·44	
8	Poona ... ..	770,334	62	·08	232	·30	
9	Sholápur ... ..	574,999	36	·06	371	·64	
10	Sátára ... ..	964,847	33	·03	275	·29	
11	Ratnágiri ... ..	1,083,350	87	·08	106	·10	
Southern Registration District.							
12	Belgaum ... ..	871,163	175	·20	285	·33	
13	Dhárwár ... ..	870,565	283	·33	167	·19	
14	Bijápur ... ..	717,798	266	·37	51	·07	
15	Kánara ... ..	350,246	331	·95	15	·04	
Gujarat Registration District.							
16	Surat ... ..	526,465	...	...	1	·02	
17	Broach ... ..	243,112	...	...	4	·02	
18	Kaira ... ..	604,528	...	...	7	·01	
19	Panch Maháls ... ..	331,791	...	...	8	·02	
20	Ahmedabad ... ..	568,759	...	...	10	·02	
Sind Registration District.							
21	Karáchi ... ..	307,576	8	·02	10	·03	
22	Hyderabad ... ..	480,469	2	·00	1	·00	
23	Thar and Párkar ... ..	386,343	32	·08	6	·02	
24	Nawábshah ... ..	402,915	8	·02	10	·03	
25	Lárkana ... ..	562,636	9	·02	3	·00	
26	Sukkur ... ..	394,216	7	·02	7	·02	
27	Upper Sind Frontier ... ..	230,036	...	...	...	...	
Total of Districts ...		15,421,829	1,463	·09	2,376	·15	

*diseases in the* DISTRICTS *and* TOWNS *of the* BOMBAY PRESIDENCY  
year 1927

6		7		8		9		10	
Relapsing Fever.		Kala Azar.		Malaria.		Other Fevers.		Influenza.	
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
...	...	...	...	243	·26	12,375	13·37	...	...
...	...	...	...	483	·85	5,609	9·86	...	...
...	...	...	...	1,463	2·07	7,306	10·36	45	·06
...	...	...	...	923	1·33	5,230	7·53	5	·01
...	...	...	...	46	·50	326	3·55	...	...
...	...	...	...	416	·78	4,362	8·18	...	...
...	...	...	...	...	...	...	...	...	...
...	...	...	...	1,568	2·35	2,396	3·59	...	...
...	...	...	...	2,296	2·98	5,714	7·43	2	·00
...	...	...	...	217	·33	5,400	9·39	...	...
...	...	...	...	198	·21	10,257	10·63	1	·00
...	...	...	...	250	·23	7,334	6·77	9	·01
...	...	...	...	...	...	...	...	...	...
...	...	...	...	1,705	1·96	3,737	4·27	...	...
...	...	...	...	2,305	2·65	5,751	6·61	17	·02
...	...	...	...	586	·82	6,143	8·56	4	·00
...	...	...	...	1,291	3·69	2,684	7·66	5	·01
...	...	...	...	...	...	...	...	...	...
...	...	...	...	22	·04	4,917	9·34	...	...
...	...	...	...	4	·02	3,108	12·78	...	...
...	...	...	...	4	·01	5,087	8·41	...	...
...	...	...	...	12	·04	4,019	12·11	79	·24
...	...	...	...	108	·19	9,243	16·25	...	...
...	...	...	...	...	...	...	...	...	...
...	...	...	...	3,135	10·19	336	1·09	...	...
...	...	...	...	4,647	9·67	415	·86	...	...
...	...	...	...	4,197	10·86	1,909	4·94	...	...
...	...	...	...	4,217	10·47	1,017	2·52	...	...
...	...	...	...	5,806	10·32	1,560	2·77	9	·02
...	...	...	...	4,172	10·58	397	1·01	9	·02
...	...	...	...	2,272	9·88	223	·97	...	...
...	...	...	...	42,591	2·76	116,855	7·58	185	·01



## ANNUAL FORM

1	2	11		12		13	
No.	Districts and Towns.	Pneumonia.		Phthisis.		Other Respiratory diseases.	
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
A.—DISTRICTS (EXCLUDING TOWNS)							
Western Registration District.							
1	East Khandesh ... ..	49	·05	863	·94	2,607	2·84
2	West Khandesh ... ..	64	·11	408	·72	1,254	2·20
3	Nasik ... ..	265	·38	636	·90	2,485	3·52
4	Thana ... ..	651	·94	1,042	1·50	745	1·07
5	Bombay Suburban ... ..	133	1·45	100	1·09	190	2·06
6	Kolaba ... ..	278	·52	1,536	2·97	724	1·36
Central Registration District.							
7	Ahmednagar ... ..	24	·04	338	·51	3,119	4·68
8	Poona ... ..	93	·12	651	·85	2,960	4·81
9	Sholapur ... ..	22	·04	371	·64	1,406	2·45
10	Satara ... ..	52	·05	693	·72	1,884	1·95
11	Ratnágiri ... ..	32	·03	2,847	2·63	2,624	2·42
Southern Registration District.							
12	Belgaum ... ..	51	·06	670	·77	2,413	2·77
13	Dhárwár ... ..	17	·02	565	·65	1,790	2·06
14	Bijápur ... ..	9	·01	493	·69	1,575	2·19
15	Kánara ... ..	221	·63	211	·60	535	1·53
Gujarat Registration District.							
16	Surat ... ..	1,035	1·97	514	·98	3,118	5·92
17	Broach ... ..	285	1·17	167	·69	1,472	6·05
18	Kaira ... ..	268	·44	1,073	1·77	4,636	7·67
19	Parbh Maháls ... ..	194	·40	194	·58	667	2·01
20	Ahmedabad ... ..	328	·57	664	1·17	1,424	2·50
Sind Registration District.							
21	Karáchi ... ..	281	·91	69	·22	21	·07
22	Hyderabad ... ..	532	1·11	58	·12	20	·04
23	Thar and Parkar ... ..	713	1·85	54	·14	69	·18
24	Nawábshah ... ..	254	·63	29	·07	24	·06
25	Lárkana ... ..	78	·14	34	·06	18	·03
26	Sukkur ... ..	57	·14	32	·08	13	·03
27	Upper Sind Frontier ... ..	17	07	2	·00	2	·00
Total of Districts ...		5,944	·39	14,364	·93	37,795	2·45

No. VI (a)—*contd.*

14		15		16	17			18	19
Dysentery.		Diarrhœa.		Deaths from child birth.	Deaths under 1 year.			Infant mortality rate per 1,000 births.	No.
Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.		
337	·37	1,503	1·63	71	4,294	3,683	7,977	172·68	1
42	·07	508	·89	20	2,217	2,043	4,260	142·02	2
82	·12	1,124	1·59	234	3,502	2,884	6,386	172·42	3
110	·16	293	·42	139	1,567	1,272	2,839	112·86	4
48	·52	131	1·43	20	154	126	280	168·14	5
204	·38	535	1·00	106	1,640	1,422	3,062	135·56	6
106	·16	2,034	3·05	218	3,332	2,693	6,025	173·30	7
21	·03	1,458	1·89	103	2,940	2,291	5,231	163·70	8
7	·01	1,466	2·55	80	2,576	2,132	4,708	175·93	9
16	·02	2,290	2·37	84	3,561	3,009	6,570	157·46	10
613	·57	506	·47	192	1,896	1,536	3,432	94·32	11
156	·18	2,329	2·67	170	2,687	2,192	4,879	130·89	12
99	·11	667	·77	240	2,670	2,211	4,881	136·55	13
149	·21	970	1·35	71	2,196	1,705	3,901	133·43	14
369	1·05	524	1·50	268	1,328	1,190	2,518	199·30	15
110	·21	186	·35	27	1,792	1,675	3,467	156·13	16
10	·04	134	·55	29	1,101	1,014	2,115	178·87	17
200	·33	512	·85	51	1,717	1,823	3,540	151·06	18
26	·08	173	·52	109	822	789	1,611	109·59	19
56	·10	197	·34	40	1,550	1,507	3,057	151·48	20
14	·04	19	·06	56	420	394	814	180·57	21
7	·01	12	·02	87	555	429	984	166·72	22
10	·03	41	·11	117	723	648	1,371	149·44	23
9	·02	6	·01	113	626	495	1,121	127·82	24
1	·00	9	·02	120	894	797	1,691	148·24	25
5	·01	13	·03	81	696	527	1,223	124·74	26
...	...	1	·00	19	300	242	542	87·25	27
2,807	·18	17,641	1·14	2,865	47,756	40,729	88,485	148·15	



1	2	3	4		5	
No.	Districts and Towns.	Popula- tion according to Census of 1921.	Enteric Fever.		Measles.	
			Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS.					
	East Khandesh District.					
1	Jalgaon ... ..	23,696	1	·04	57	2·41
2	Bhusáwal ... ..	24,933	...	...	15	·60
3	Chopda ... ..	16,930	...	...	3	·18
4	Dharangaon ... ..	14,824	...	...	5	·34
5	Parola ... ..	12,079	...	...	2	·17
6	Amálnér ... ..	17,068	...	...	...	...
7	Erandol ... ..	12,489	...	...	...	...
8	Nasirabad ... ..	12,188	...	...	...	...
9	Chálisgaon ... ..	11,990	...	...	2	·17
10	Yawal ... ..	10,888	...	...	...	...
	West Khandesh District.					
11	Dhulia ... ..	30,061	...	...	11	·36
12	Nandurbar ... ..	13,842	...	...	1	·07
	Nasik District.					
13	Násik ... ..	42,715	...	...	6	·14
14	Yeola ... ..	13,911	...	...	...	...
15	Málegaon ... ..	23,711	...	...	3	·13
16	Igatpuri ... ..	9,977	...	...	...	...
17	Manmad ... ..	11,866	...	...	17	1·43
18	Trimbak ... ..	4,538	...	...	...	...
19	Deolali Cantonment ... ..	12,640	...	...	...	...
	Thana District.					
20	Thána ... ..	22,116	...	...	...	...
21	Bhiwandi ... ..	12,188	...	...	1	·08
22	Kalyán ... ..	17,573	...	...	1	·06
23	Bassein ... ..	10,364	...	...	...	...
	Bombay Suburban District.					
24	Bandra ... ..	28,738	1	·04	8	·28
25	Kurla ... ..	26,059	1	·04	7	·27
26	Santa Cruz Cantonment ... ..	4,701	...	...	...	...
	Kolaba District.					
27	Alibág ... ..	5,253	...	...	2	·38
28	Panvel ... ..	8,622	...	...	...	...
29	Mahád ... ..	7,192	...	...	...	...

No. VI (a)—*contd.*

6		7		8		9		10	
Relapsing Fever.		Kala Azar.		Malaria.		Other Fevers.		Influenza.	
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
...	...	...	...	...	...	173	7.30	...	...
...	...	...	...	...	...	182	7.30	...	...
...	...	...	...	...	...	161	9.51	...	...
...	...	...	...	...	...	55	3.71	...	...
...	...	...	...	...	...	112	9.27	...	...
...	...	...	...	...	...	91	5.33	...	...
...	...	...	...	...	...	94	7.53	...	...
...	...	...	...	1	.08	165	13.54	...	...
...	...	...	...	37	3.09	108	9.01	...	...
...	...	...	...	2	.18	50	4.59	...	...
...	...	...	...	...	...	103	3.43	...	...
...	...	...	...	...	...	80	5.78	...	...
...	...	...	...	45	1.05	119	2.79	...	...
...	...	...	...	10	.72	186	13.37	...	...
...	...	...	...	88	3.71	106	4.07	...	...
...	...	...	...	...	...	109	10.93	...	...
...	...	...	...	...	...	43	3.62	...	...
...	...	...	...	...	...	16	3.53	...	...
...	...	...	...	...	...	...	...	...	...
...	...	...	...	12	.54	185	8.37	1	.04
...	...	...	...	...	...	117	9.60	...	...
...	...	...	...	3	.17	41	2.33	...	...
...	...	...	...	27	2.60	4	.39	...	...
...	...	...	...	5	.17	34	1.18	...	...
...	...	...	...	20	.77	80	3.07	...	...
...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	24	4.58	...	...
...	...	...	...	20	2.32	6	.70	...	...
...	...	...	...	...	...	14	1.95	...	...



1  No.	2  Districts and Towns.		11  Pneumonia.		12  Phthisis.		13  Other Respiratory diseases.	
			Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS.							
	<i>East Khandesh District.</i>							
1	Jalgaon	...	7	·29	37	1·56	64	2·70
2	Bhusáwal	...	16	·64	2	·08	15	·60
3	Chopda	...	...	...	1	·06	27	1·59
4	Dharangaon	...	...	...	63	4·25	5	·34
5	Parola	...	...	...	3	·25	54	4·50
6	Amálnér	...	...	...	18	1·05	41	2·40
7	Erandol	...	...	...	19	1·52	30	2·40
8	Nasirabad	...	...	...	15	1·23	61	5·00
9	Chálisgaon	...	2	·17	47	3·92	...	...
10	Yawal	...	...	...	1	·09	42	3·86
	<i>West Khandesh District.</i>							
11	Dhulía	...	35	1·16	82	2·73	54	1·80
12	Nandurbar	...	1	·07	10	·72	30	2·17
	<i>Nasik District.</i>							
13	Násik	...	215	5·03	108	2·53	102	2·39
14	Yeola	...	4	·28	28	2·01	11	·79
15	Málegaon	...	7	·30	20	·84	65	2·74
16	Igatpuri	...	3	·30	3	·30	19	1·90
17	Manmad	...	1	·09	11	·93	33	2·78
18	Trimbak	...	1	·22	4	·88	9	1·98
19	Deolali Cantonment	...	11	·87	3	·24	5	·40
	<i>Thana District.</i>							
20	Thána	...	27	1·22	43	1·95	27	1·22
21	Bhiwandi	...	20	1·64	33	2·71	23	1·89
22	Kalyán	...	20	1·14	32	1·82	65	3·70
23	Bassein	...	28	2·70	11	1·06	5	·48
	<i>Bombay Suburban District.</i>							
24	Bandra	...	47	1·64	19	·66	27	·94
25	Kurla	...	59	2·26	4	·15	76	2·92
26	Santa Cruz Cantonment	...	2	·42	...	...	...	...
	<i>Kolaba District.</i>							
27	Alibág	...	1	·19	7	1·33	3	·57
28	Panvel	...	12	·39	21	2·44	19	2·20
29	Mahád	...	10	·39	14	1·95	5	·69

No. VI (a)—*contd.*

14		15		16	17			18	19
Dysentery.		Diarrhœa.		Deaths from child birth.	Deaths under 1 year.			Infant morta- lity rate per 1,000 births.	No.
Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.		
4	·17	44	1·86	3	87	63	150	237·80	1
3	·12	28	1·12	...	45	64	109	183·19	2
1	·06	4	·24	...	37	30	67	155·09	3
5	·34	23	1·55	3	53	40	93	174·81	4
1	·08	6	·50	2	51	41	92	188·52	5
2	·12	12	·70	...	25	29	54	152·97	6
13	1·04	7	·57	1	49	45	94	189·90	7
8	·66	45	3·69	2	70	53	123	194·31	8
6	·50	16	1·33	3	50	35	85	206·81	9
1	·09	8	·74	...	16	9	25	78·62	10
4	·03	35	1·16	...	105	76	181	145·27	11
...	...	9	·65	...	41	41	82	158·91	12
8	·18	82	·75	15	162	158	320	270·96	13
...	...	6	·43	6	41	50	91	234·54	14
...	...	96	4·05	12	82	55	137	199·13	15
...	...	3	·30	2	40	20	60	243·90	16
...	...	8	·67	2	37	27	64	241·51	17
1	·22	...	...	2	12	4	16	115·11	18
...	...	4	·32	...	5	2	7	338·83	19
5	·23	14	·63	4	28	36	64	186·05	20
...	...	16	1·31	1	23	23	46	131·43	21
7	·40	19	1·08	6	49	44	93	179·10	22
2	·19	3	·29	...	18	7	25	67·20	23
19	·66	41	·38	3	64	46	100	147·71	24
37	1·42	11	·42	6	87	65	142	300·21	25
...	...	...	...	...	...	1	1	166·66	26
3	·57	5	·95	4	8	7	15	102·73	27
2	·23	2	·23	4	15	4	19	101·60	28
38	5·28	...	...	...	8	8	16	139·13	29



1	2	3	4		5		
No.	Districts and Towns.	Popula- tion according to Census of 1921.	Enteric Fever.		Measles.		
			Deaths.	Ratio.	Deaths.	Ratio.	
B.—TOWNS—contd.							
Kolaba District—contd.							
30	Uran	8,135	...	...	2	·25	
31	City of Bombay	1,148,815	134	·12	95	·08	
Ahmednagar District.							
32	Ahmednagar	33,138	3	·09	24	·73	
33	Sangamner	12,737	...	...	5	·39	
34	Ahmednagar Cantonment	10,997	2	·18	...	...	
Poona District.							
35	Poona City	133,122	42	·32	163	1·22	
36	Poona Suburban	13,971	2	·14	1	·07	
37	Baramati	11,905	7	·59	17	1·43	
38	Khed	7,013	...	...	...	...	
39	Lonavla	10,471	...	...	...	...	
40	Junnar	7,376	1	·14	...	...	
41	Poona Cantonment	25,498	1	·04	...	...	
42	Kirkee do.	7,991	...	...	...	...	
Sholapur District.							
43	Sholapur	119,347	3	·03	149	1·25	
44	Barsi	22,074	2	·09	21	·95	
45	Pandharpur	25,210	2	·03	18	·71	
Satara District.							
46	Satara	22,454	2	·09	20	·89	
47	Wai	10,208	10	·99	2	·20	
48	Karad	11,255	...	...	...	...	
49	Ashta	9,016	...	...	...	...	
50	Islampur	7,915	2	·25	5	·63	
Ratnagiri District.							
51	Ratnagiri	18,286	3	·44	1	·05	
52	Vengurla	19,126	7	·37	...	...	
53	Malwan	22,213	2	·09	...	...	
54	Chiplun	11,095	...	...	...	...	
Belgaum District.							
55	Belgaum	36,214	31	·86	34	·94	
56	Gokak	9,989	5	·50	9	·90	
57	Athni	13,538	...	...	...	...	
58	Nipani	11,878	1	·08	...	...	
59	Belgaum Cantonment	6,880	1	·15	...	...	

No. VI (a)—*contd.*

6		7		8		9		10	
Relapsing Fever.		Kala Azar.		Malaria.		Other Fevers.		Influenza.	
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
..	..	..	..	..	..	19	2.34	..	..
..	..	..	..	360	.31	1,818	1.58	78	.07
..	..	..	..	40	1.21	59	1.78	1	.03
..	..	..	..	6	.47	31	2.43	..	..
..	..	..	..	..	..	38	3.46	..	..
..	..	..	..	117	.82	791	5.94	..	..
..	..	..	..	26	1.86	80	5.73	..	..
..	..	..	..	6	.50	77	6.47	..	..
..	..	..	..	..	..	21	2.99	..	..
..	..	..	..	36	3.45	63	6.01	..	..
..	..	..	..	14	1.90	30	4.06	..	..
..	..	..	..	1	.04	87	3.41	..	..
..	..	..	..	9	1.12	3	.38	..	..
..	..	..	..	..	..	1,622	13.59	..	..
..	..	..	..	4	.18	227	10.28	..	..
..	..	..	..	4	.16	263	10.43	..	..
..	..	..	..	..	..	146	6.50	..	..
..	..	..	..	2	.20	36	3.53	..	..
..	..	..	..	..	..	43	3.82	..	..
..	..	..	..	..	..	33	3.66	..	..
..	..	..	..	2	.25	21	2.65	..	..
..	..	..	..	..	..	53	2.90	..	..
..	..	..	..	8	.42	78	4.08	1	.05
..	..	..	..	4	.18	66	2.97	..	..
..	..	..	..	1	.09	86	7.82	..	..
..	..	..	..	13	.36	149	4.11	..	..
..	..	..	..	2	.20	28	2.80	..	..
..	..	..	..	8	.59	62	4.58	..	.07
..	..	..	..	1	.08	111	9.34	..	..
..	..	..	..	2	.29	49	7.12	..	..



1  No.	2  Districts and Towns.	11  Pneumonia.		12  Phthisis.		13  Other Respiratory diseases.	
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS—contd.						
	<i>Kolaba District—contd.</i>						
30	Uran ... ..	6	·74	13	1·60	5	·61
31	City of Bombay ... ..	7,464	6·50	1,557	1·36	2,443	2·13
	<i>Ahmednagar District.</i>						
32	Ahmednagar ... ..	14	·42	59	1·78	166	5·01
33	Sangamner ... ..	...	...	6	·47	16	1·26
34	Ahmednagar Cantonment ... ..	12	1·09	9	·82	48	4·37
	<i>Poona District.</i>						
35	Poona City ... ..	932	7·00	488	3·67	374	2·80
36	Poona Suburban ... ..	24	1·72	16	1·14	13	·93
37	Baramati ... ..	10	·85	14	1·17	9	·75
38	Khed ... ..	...	...	1	·14	27	3·85
39	Lonavla ... ..	33	3·15	15	1·43	28	2·68
40	Junnar ... ..	1	·14	31	4·20	56	7·59
41	Poona Cantonment ... ..	12	·47	15	·59	42	1·65
42	Kirkee do. ... ..	60	7·51	25	3·13	28	8·50
	<i>Sholapur District.</i>						
43	Sholapur ... ..	36	·30	165	1·38	262	2·20
44	Bārsi ... ..	1	·05	12	·54	39	1·77
45	Pandharpur ... ..	34	1·35	49	1·94	122	4·84
	<i>Satara District.</i>						
46	Sitāra ... ..	8	·36	38	1·69	43	1·91
47	Wai ... ..	3	·29	28	2·74	19	1·86
48	Karād ... ..	1	·09	4	·36	6	·53
49	Ashta ... ..	2	·22	1	·11	6	·67
50	Islāmpur ... ..	...	...	7	·88	36	4·55
	<i>Ratnagiri District.</i>						
51	Ratnagiri ... ..	7	·38	52	2·84	23	1·26
52	Vengurla ... ..	10	·52	44	2·30	37	1·93
53	Mālwan ... ..	4	·18	38	1·71	26	1·17
54	Chiplun ... ..	1	·09	31	2·82	12	1·09
	<i>Belgaum District.</i>						
55	Belgaum ... ..	35	·97	107	2·95	67	1·85
56	Gokāk ... ..	...	...	16	1·60	18	1·80
57	Athni ... ..	...	...	20	1·48	36	2·66
58	Nipāni ... ..	1	·08	13	1·09	53	4·46
59	Belgaum Cantonment ... ..	4	·58	4	·58	11	1·60

No. VI (a)—*contd.*

14		15		16	17			18	19
Dysentery.		Diarrhoea.		Deaths from child birth.	Deaths under 1 year.			Infant mortality rate per 1,000 births.	No.
Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.		
1	·12	2	·24	5	7	3	10	92·59	30
383	·33	1,069	·93	106	3,667	3,131	6,798	319·12	31
3	·08	28	·85	16	56	59	115	138·06	32
1	·08	8	·63	9	25	20	45	116·88	33
14	1·27	2	·18	2	29	13	42	161·54	34
16	·12	311	2·34	42	863	670	1,533	574·18	35
1	·07	19	1·36	1	40	24	64	688·17	36
...	...	24	2·02	...	30	21	51	129·36	37
...	...	1	·14	...	8	7	15	69·77	38
1	·10	15	1·43	2	22	21	43	179·17	39
...	...	14	1·90	1	18	13	31	112·31	40
6	·24	12	·45	3	15	11	26	242·99	41
2	·25	21	2·63	...	41	28	69	469·39	42
2	·01	224	1·88	37	564	442	1,006	199·05	43
...	...	30	1·36	...	108	86	194	262·52	44
...	·12	74	2·94	9	211	180	391	425·00	45
2	·09	51	2·27	10	72	49	121	271·91	46
...	...	14	1·37	3	21	18	39	129·14	47
...	...	4	·35	1	19	8	27	101·12	48
...	...	30	3·33	...	21	18	39	142·86	49
...	...	14	1·77	1	18	9	27	104·65	50
3	·16	10	·55	2	23	21	50	102·46	51
7	·37	10	·52	3	40	25	65	116·30	52
62	2·79	3	·13	...	32	27	59	110·28	53
3	·27	4	·36	2	19	10	29	95·71	54
10	·28	43	1·19	2	105	71	176	169·88	55
1	·10	34	3·40	3	31	21	52	140·92	56
2	·15	12	·89	1	8	10	18	55·90	57
...	...	6	·51	...	23	29	52	116·85	58
1	·15	7	1·02	2	8	13	21	233·33	59



1 No.	2 Districts and Towns.		3 Population according to Census of 1921.	4 Enteric Fever.		5 Measles.	
				Deaths.	Ratio.	Deaths.	Ratio.
	B,—TOWNS— <i>contd.</i>						
	<i>Dharwar District.</i>						
60	Dhárwár	...	34,327	27	·79	8	·23
61	Hubli	...	69,140	7	·10	19	·27
62	Gadag-Bettigeri	...	41,158	5	·12	36	·87
63	Ránebennur	...	13,930	...	...	5	·36
64	Nawalgund	...	7,089	1	·14	...	...
	<i>Bijapur District.</i>						
65	Bijápur	...	32,471	16	·49	...	...
66	Bágalkot	...	19,471	6	·31	...	...
67	Guledgud	...	14,760	...	...	...	...
68	Ilkal	...	11,856	2	·17	...	...
	<i>Kanara District.</i>						
69	Kárwár	...	14,463	1	·07	...	...
70	Kumta	...	14,291	4	·28	...	...
71	Gokarn	...	8,307	...	...	...	...
72	Honáwar	...	7,035	2	·28	...	...
73	Bhatkal	...	7,134	...	...	...	...
	<i>Surat District.</i>						
74	Surat	...	117,428	11	·09	9	·08
75	Bulsar	...	19,681	...	...	7	·36
76	Ránder	...	10,547	...	...	...	...
	<i>Broach District.</i>						
77	Broach	...	42,626	...	...	4	·09
78	Jambusar	...	10,217	...	...	1	·10
79	Ankleshwar	...	11,756	...	...	3	·26
	<i>Kaira District.</i>						
80	Kaira	...	8,277	...	...	...	...
81	Mehmedabad	...	6,236	...	...	...	...
82	Nadiád	...	31,919	...	...	...	...
83	Borsad	...	12,113	...	...	...	...
84	Anand	...	11,024	...	...	...	...
85	Umreth	...	14,024	...	...	...	...
86	Dákore	...	7,990	...	...	1	·13
87	Kapadvanj	...	14,794	...	...	...	...

No. VI (a)—*contd.*

6		7		8		9		10	
Relapsing Fever.		Kala Azar.		Malaria.		Other Fevers.		Influenza.	
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
...	...	...	...	18	·52	117	·3·41	...	...
...	...	...	...	29	·42	222	3·21	...	...
...	...	...	...	3	·07	340	8·26	...	...
...	...	...	...	11	·79	21	1·51	...	...
...	...	...	...	2	·23	30	4·22	...	...
...	...	...	...	73	2·25	20	·62	...	...
...	...	...	...	4	·21	133	6·83	...	...
...	...	...	...	...	...	184	12·47	...	...
...	...	...	...	15	1·27	40	3·37	...	...
...	...	...	...	56	3·87	1	·07	...	...
...	...	...	...	1	·07	62	4·34	...	...
...	...	...	...	12	1·44	32	3·85	...	...
...	...	...	...	...	...	28	3·98	...	...
...	...	...	...	...	...	62	8·69	...	...
...	...	...	...	327	2·78	37	·32	2	·02
...	...	...	...	...	...	32	1·63	...	...
...	...	...	...	1	·10	69	6·54	...	...
...	...	...	...	1	·02	231	5·42	...	...
...	...	...	...	85	8·32	1	·10	...	...
...	...	...	...	...	...	223	18·97	...	...
...	...	...	...	...	...	84	10·15	...	...
...	...	...	...	...	...	84	13·47	...	...
...	...	...	...	...	...	424	13·28	...	...
...	...	...	...	...	...	181	14·94	...	...
...	...	...	...	...	...	187	16·96	...	...
...	...	...	...	82	5·85	7	·50	...	...
...	...	...	...	...	...	88	11·02	...	...
...	...	...	...	...	...	191	12·91	...	...



1	2	11		12		13			
No.	Districts and Towns.	Pneumonia.		Phthisis.		Other Respiratory diseases.			
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.		
B.—TOWNS—contd.									
Dharwar District.									
60	Dhárwar	...	...	12	·35	57	1·66	128	3·73
61	Hubli	...	...	11	·16	130	1·88	124	1·79
62	Gadag-Bettigeri	...	...	28	·68	62	1·51	189	4·59
63	Ranebennur	...	...	...	...	55	3·95	44	3·16
64	Nawalgund	...	...	1	·14	30	4·22	7	·99
Bijapur District.									
65	Bijápur	...	...	20	·62	41	1·26	57	1·76
66	Bágalkot	...	...	2	·10	38	1·95	52	2·67
67	Guledgud	...	...	...	...	13	·88	19	1·29
68	Ilkal	...	...	...	...	54	4·55	24	2·02
Kanara District.									
69	Kárwar	...	...	8	·55	10	·69	8	·55
70	Kumta	...	...	5	·35	8	·56	32	2·24
71	Gokarn	...	...	6	·72	24	2·89	1	·12
72	Honáwar	...	...	...	...	1	·14	12	1·71
73	Bhatkal	...	...	...	...	11	1·54	12	1·68
Surat District.									
74	Surat	...	...	684	5·82	319	2·72	492	4·19
75	Bulsar	...	...	112	5·69	16	·81	10	·51
76	Ránder	...	...	7	·66	49	4·65	19	1·80
Broach District.									
77	Broach	...	...	14	·33	52	1·22	251	5·89
78	Jambusar	...	...	24	2·35	7	·69	80	7·83
79	Ankleshwar	...	...	6	·51	10	·85	35	2·98
Kaira District.									
80	Kaira	...	...	2	·24	10	1·21	69	8·34
81	Mehmedabad	...	...	...	...	12	1·93	22	3·53
82	Nadiád	...	...	204	6·39	64	2·01	34	1·07
83	Borsad	...	...	2	·16	...	...	31	2·56
84	Anand	...	...	4	·36	9	·82	7	·63
85	Umreth	...	...	...	...	2	·14	245	17·47
86	Dákore	...	...	12	1·50	19	2·38	57	7·13
87	Kapadvanj	...	...	11	·74	33	2·23	40	2·70

No. VI (a)—*contd.*

14		15		16	17			18	19
Dysentery.		Diarrhœa.		Deaths from child birth.	Deaths under 1 year.			Infant mortality rate per 1,000 births.	No.
Deaths.	Ratio.	Deaths.	Ratio.		Male	Female.	Total		
4	·12	34	·99	6	73	44	117	105·12	60
2	·03	28	·41	7	121	82	203	95·35	61
5	·12	33	·80	1	132	131	263	159·30	62
1	·07	12	·86	11	47	48	95	153·97	63
...	...	9	1·27	1	8	7	15	72·12	64
7	·22	23	·71	2	49	38	87	94·67	65
3	·15	32	1·64	...	75	68	143	168·24	66
...	...	...	...	1	67	45	112	166·42	67
1	·08	3	·25	...	74	53	127	260·78	68
3	·21	4	·28	5	10	17	27	71·05	69
55	3·85	21	1·47	6	25	20	45	136·78	70
9	1·08	11	1·32	5	10	10	20	84·74	71
8	1·14	12	1·71	1	25	14	39	118·18	72
14	1·96	10	1·40	4	10	9	19	91·35	73
47	·40	188	1·60	44	788	713	1,501	325·24	74
10	·51	1	·05	6	34	28	62	111·91	75
7	·66	1	·10	...	35	22	57	201·41	76
2	·05	31	·73	31	127	118	245	131·58	77
1	·09	...	...	3	25	30	55	109·56	78
...	...	1	·08	1	53	33	86	186·55	79
...	...	8	·97	...	22	22	44	171·21	80
6	·96	4	·64	...	20	18	38	139·19	81
4	·13	1	·03	10	127	85	212	194·14	82
29	2·39	10	·83	2	61	68	129	193·69	83
..	...	5	·46	...	23	11	34	103·34	84
2	·14	2	·14	...	68	52	120	183·77	85
1	·13	16	2·00	3	31	29	60	242·91	86
1	·07	11	·74	1	40	39	79	140·32	87



1	2	3	4		5	
No.	Districts and Towns.	Population according to Census of 1921.	Enteric Fever.		Measles.	
			Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS— <i>contd.</i>					
	<i>Panch Mahals District.</i>					
88	Godhra ... ..	26,969	...	...	3	·11
89	Dohad ... ..	16,071	...	...	8	·50
	<i>Ahmedabad District.</i>					
90	Ahmedabad ... ..	270,599	...	...	10	·04
91	Dhandhuka ... ..	8,056	...	...	1	·12
92	Viramgaon ... ..	26,252	...	...	1	·04
93	Dholka ... ..	12,513	...	...	...	...
94	Ahmedabad Cantonment ... ..	1,745	...	...	...	...
	<i>Karachi District.</i>					
95	Karachi ... ..	199,014	51	·26	37	·18
96	Tatta ... ..	8,470	...	...	...	...
97	Kotri ... ..	9,072	1	·11	...	...
98	Karachi Cantonment ... ..	6,525	2	·31	...	...
	<i>Hyderabad District.</i>					
99	Hyderabad ... ..	72,625	57	·78	4	·06
100	Halla ... ..	5,757	...	...	...	...
101	Matiali ... ..	4,638	...	...	...	...
102	Hyderabad Cantonment ... ..	3,760	...	...	...	...
	<i>Thar and Parkar District.</i>					
103	Umarkot ... ..	4,199	...	...	...	...
104	Mirpurkhas ... ..	5,765	...	...	2	·34
	<i>Nawabshah District.</i>					
105	Nawábsháh ... ..	2,771	...	...	...	...
106	Tando Adam ... ..	12,966	...	...	...	...
	<i>Larkana District.</i>					
107	Lárkána ... ..	17,700	9	·59	4	·23
108	Kambar ... ..	7,613	...	...	...	...
109	Ratodero ... ..	5,565	...	...	...	...
110	Sehwan ... ..	4,423	1	·23	2	·46

No. VI (a)—*contd.*

6		7		8		9		10	
Relapsing Fever.		Kala Azar.		Malaria.		Other Fevers.		Influenza.	
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
...	...	...	...	...	...	418	15.50	...	...
...	...	...	...	1	.06	233	14.50	...	...
...	...	...	...	...	...	3,014	11.14	2	.01
...	...	...	...	...	...	108	13.41	...	...
...	...	...	...	...	...	452	17.22	...	...
...	...	...	...	176	14.07	56	4.47	...	...
...	...	...	...	...	...	21	12.04	...	...
...	...	...	...	17	.09	1,005	5.04	8	.04
...	...	...	...	67	7.91	63	7.43	...	...
...	...	...	...	82	9.04	...	...	...	...
...	...	...	...	2	.31	32	4.90	...	...
...	...	...	...	334	4.60	38	.52	...	...
...	...	...	...	32	5.56	8	1.39	...	...
...	...	...	...	22	4.75	47	10.13	...	...
...	...	...	...	...	...	24	6.38	...	...
...	...	...	...	33	7.85	...	...	...	...
...	...	...	...	68	11.79	...	...	...	...
...	...	...	...	11	3.96	38	13.72	...	...
...	...	...	...	100	7.71	9	.69	...	...
...	...	...	...	117	6.61	3	.17	...	...
...	...	...	...	48	6.30	66	8.67	...	...
...	...	...	...	8	1.44	95	17.07	...	...
...	...	...	...	19	4.29	3	.69	...	...



1	2	11		12		13	
No.	Districts and Towns.	Pneumonia.		Phthisis.		Other Respiratory Diseases.	
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	B—TOWNS— <i>continued.</i>						
	<i>Panch Mahals District.</i>						
88	Godhra ... ..	8	·30	20	·74	16	·59
89	Dohad ... ..	1	·06	...	...	4	·25
	<i>Ahmedabad District.</i>						
90	Ahmedabad ... ..	142	·52	1,029	3·80	2,681	9·91
91	Dhandhuka ... ..	3	·37	18	2·23	49	6·08
92	Viramgaon ... ..	22	·84	43	1·64	251	9·56
93	Dholka ... ..	1	·08	14	1·12	44	3·52
94	Ahmedabad Cantonment ... ..	...	...	1	·57	3	1·72
	<i>Karachi District.</i>						
95	Karachi ... ..	1,005	5·04	471	2·36	629	3·17
96	Tatta ... ..	...	...	...	...	...	...
97	Kotri ... ..	41	4·50	16	1·77	2	·23
98	Karachi Cantonment ... ..	7	1·07	...	...	...	...
	<i>Hyderabad District.</i>						
99	Hyderabad ... ..	453	6·24	175	2·41	99	1·36
100	Halla ... ..	6	1·04	2	·35	...	...
101	Matiali ... ..	7	1·51	4	·86	...	...
102	Hyderabad Cantonment ... ..	9	2·39	...	...	...	...
	<i>Thar and Parkar District.</i>						
103	Umarkot ... ..	35	·34	9	2·16	5	1·20
104	Mirpurkhas ... ..	19	3·29	4	·70	8	1·40
	<i>Nawabshah District.</i>						
105	Nawábsháh ... ..	3	1·08	...	...	...	...
106	Tando Adam ... ..	14	1·07	9	·69	1	·07
	<i>Larkana District.</i>						
107	Lárkána ... ..	42	2·37	12	·69	25	1·41
108	Kambar ... ..	4	·52	4	·52	2	·26
109	Ratodero ... ..	...	...	...	...	2	·36
110	Sehwan ... ..	12	2·72	2	·46	1	·23

No. VI (a)—*contd.*

14		15		16	17			18	19
Dysentery.		Diarrhoea.		Deaths from child birth.	Deaths under 1 year.			Infant morta- lity rate per 1,000 births.	No.
Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.		
...	...	3	·11	11	96	83	179	121·36	88
3	·18	...	...	6	40	48	88	154·93	89
136	·50	272	1·01	128	1,738	1,582	3,320	287·27	90
2	·25	6	·75	...	34	36	70	190·74	91
3	·11	10	·38	15	136	112	248	382·13	92
...	...	4	·32	...	55	40	95	164·36	93
2	1·15	...	...	1	6	1	7	318·18	94
41	·21	372	1·87	93	1,152	1,004	2,156	211·02	95
...	...	...	...	4	9	9	18	125·00	96
...	...	10	1·10	3	16	14	30	300·00	97
...	...	1	·15	...	7	6	13	67·36	98
22	·30	62	·86	33	305	330	635	210·06	99
...	...	...	...	1	10	7	17	173·47	100
1	·22	...	...	...	12	12	24	303·80	101
...	...	1	·27	...	3	5	8	320·00	102
2	·48	1	·24	5	15	9	24	307·69	103
...	...	1	·17	4	11	8	19	256·76	104
...	...	...	...	2	9	4	13	158·54	105
...	...	1	·07	2	10	14	24	106·66	106
3	·17	5	·28	22	70	63	133	192·47	107
...	...	1	·13	11	18	20	38	175·11	108
...	...	...	...	4	23	13	36	142·86	109
...	...	1	·23	5	12	6	18	206·90	110



1	2	3	4		5	
No.	Districts and Towns.	Population according to Census of 1921.	Enteric Fever.		Measles.	
			Deaths.	Ratio.	Deaths.	Ratio.
	B—TOWNS—concl'd. <i>Sukkur District.</i>					
111	Sukkur ... ..	42,046	...	...	2	·05
112	Shikárpur ... ..	55,347	37	·67	3	·05
113	Rohri ... ..	11,378	...	...	...	...
114	Garhi Yasin ... ..	6,375	2	·31	...	...
	<i>Upper Sind Frontier District.</i>					
115	Jacobabad ... ..	10,578	...	...	...	...
	Total of Towns ...	3,743,785	513	·14	877	·23
	Total for the Presidency ...	19,165,614	1,976	·10	3,253	·17

No. VI (a)—*contd.*

6 Relapsing Fever.		7 Kala Azar.		8 Malaria.		9 Other Fevers.		10 Influenza.	
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
...	...	...	...	3	·07	489	11·63	...	...
...	...	...	...	28	·50	432	7·81	...	...
...	...	...	...	117	10·28	...	...	...	...
...	...	...	...	109	17·10	8	1·25	...	...
...	...	...	...	...	...	98	9·26	...	...
...	...	...	...	3,050	·84	18,539	4·95	94	·02
...	...	...	...	45,641	2·38	135,394	7·06	279	·01



1  No.	2  Districts and Towns.	11		12		13	
		Pneumonia		Phthisis.		Other Respiratory Diseases.	
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS—concluded.						
	<i>Sukkur District.</i>						
111	Sukkur ... ..	31	·74	4	·09	3	·07
112	Shikárpur ... ..	39	·70	22	·40	52	·94
113	Rohri. ... ..	17	1·49	7	·62	5	·44
114	Gárhí.Yasin ... ..	...	...	2	·31	3	·47
	<i>Upper Sind Frontier.</i>						
115	Jacobabad ... ..	5	·47	...	...	...	...
	Total of Towns ...	12,345	3·30	6,541	1·75	10,974	2·93
	Total for the Presidency ...	18,289	·95	20,905	1·09	48,769	2·54

No. VI (a)—*contd.*

14		15		16	17			18	19
Dysentery.		Diarrhœa.		Deaths from child birth.	Deaths under 1 year.			Infant mortality rate per 1,000 births.	No.
Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.		
...	...	9	·21	18	97	63	160	118·87	111
2	·04	14	·25	56	234	189	423	241·71	112
...	...	18	1·58	15	35	33	68	206·69	113
...	...	1	·16	5	24	11	35	161·29	114
2	·19	...	...	10	22	9	31	164·02	115
1,132	·30	3,857	1·03	949	13,808	11,716	25,524	234·15	
3,939	·21	21,508	1·12	3,814	61,564	52,445	114,009	161·42	



ANNUAL FORM NO. VII.—DEATHS *registered from CHOLERA in the*

1	2	3		4		5					
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.		January.	February.	March.	April.	May.	June.
		Number in each District.	Number from which deaths from cholera were reported.	Number in each District.	Number from which deaths from cholera were reported.						
	<i>Western Registration District.</i>										
1	East Khándesh ...	23	21	1,478	171	...	...	...	...	...	...
2	West Khándesh ...	10	7	1,242	38	...	...	...	...	...	...
3	Násik ... ..	19	13	1,667	53	...	...	...	...	...	...
4	Thána ... ..	15	7	1,546	22	...	...	...	...	25	63
5	Bombay Suburban ...	5	3	86	3	...	...	2	...	...	1
6	Kolába ... ..	13	8	1,482	37	...	...	...	9	2	8
7	Bombay City ...	1	1	1	1	1	1	...	5	1	3
	<i>Central Registration District.</i>										
8	Ahmednagar ...	15	13	1,346	148	...	...	...	...	59	15
9	Poona ... ..	20	16	1,157	164	...	...	1	6	119	195
10	Sholápur ... ..	10	10	718	290	...	...	...	82	149	416
11	Sátára ... ..	19	19	1,342	389	...	1	...	181	332	617
12	Ratnágiri ... ..	15	3	1,305	4	...	...	...	...	...	4
	<i>Southern Registration District.</i>										
13	Belgaum ... ..	15	14	1,069	504	...	...	1,810	2,877	1,180	1,071
14	Dhárwár ... ..	18	18	1,277	399	...	14	764	1,325	829	461
15	Bijápur ... ..	13	13	1,128	373	1	...	309	1,172	479	222
16	Kánara ... ..	16	6	1,264	42	...	...	35	115	26	3
	<i>Gujarat Registration District.</i>										
17	Surat ... ..	12	1	782	2	...	...	...	...	...	...
18	Broach ... ..	9	...	404	...	...	...	...	...	...	...
19	Kaira ... ..	15	...	579	...	...	...	...	...	...	...
20	Panch Maháls ...	7	...	668	...	...	...	...	...	...	...
21	Ahmedabad ... ..	13	3	871	7	...	...	...	...	14	46
	<i>Sind Registration District.</i>										
22	Karáchi ... ..	16	1	793	1	...	...	...	...	1	...
23	Hyderabad ... ..	11	...	862	...	...	...	...	...	...	...
24	Thar and Párkár ...	13	...	904	...	...	...	...	...	...	...
25	Nawábsháh ... ..	9	1	731	1	...	...	...	...	...	...
26	Lárkána ... ..	15	1	763	1	...	...	...	...	...	...
27	Sukkur ... ..	12	7	671	17	...	...	...	...	12	69
28	Upper Sind Frontier.	6	...	410	...	...	...	...	...	...	...
	Total for the Presidency.	365	186	26,546	2,667	2	16	2,021	5,772	3,223	3,194

## DISTRICTS of the BOMBAY PRESIDENCY during each month of the year 1927

						6			7			8	9
July.	August.	September.	October.	November.	December.	TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 of previous five years.	No.
						Male.	Female.	Total.	Male.	Female.	Total.		
30	956	277	35	...	...	634	664	1,298	1·16	1·25	1·21	·37	1
1	27	24	23	27	16	56	62	118	·18	·20	·19	·12	2
13	135	78	31	24	11	147	145	292	·35	·35	·35	·33	3
64	19	14	4	...	...	87	102	189	·22	·28	·25	·04	4
4	3	...	...	...	1	7	4	11	·08	·06	·07	·02	5
155	36	21	14	7	1	127	126	253	·45	·45	·45	·05	6
37	30	...	...	2	...	48	32	80	·06	08	·17	·04	7
150	396	127	70	4	...	404	417	821	1·11	1·11	1·13	·67	8
429	315	99	45	3	..	618	615	1,233	1·23	1·26	1·25	·46	9
1,299	1,293	151	101	11	...	1,810	1,692	3,502	4·73	4·71	4·72	·55	10
1,047	1,234	401	250	7	...	2,050	2,020	4,070	4·01	3·93	3·97	·34	11
...	7	...	...	...	...	6	5	11	0·01	0·01	0·01	·01	12
450	132	9	2	2	42	4,037	3,538	7,575	8·33	7·61	7·97	·15	13
182	30	8	...	...	...	2,043	1,570	3,613	3·87	3·09	3·49	·55	14
403	69	10	21	1	2	1,448	1,246	2,694	3·57	3·19	3·38	·78	15
2	...	...	...	...	...	108	73	181	·53	·37	·45	·02	16
...	...	...	...	10	1	4	7	11	·01	·02	·02	·00	17
...	...	...	...	...	...	...	...	...	...	...	...	·00	18
...	...	...	...	...	...	...	...	...	...	...	...	·00	19
...	...	...	...	...	...	...	...	...	...	...	...	·00	20
...	...	8	...	...	...	38	30	68	·08	·07	·08	·01	21
...	...	...	...	...	...	1	..	1	·00	...	·00	·05	22
...	...	...	...	...	...	...	...	...	..	...	...	·02	23
...	...	...	...	...	...	...	...	...	...	...	...	·00	24
9	...	...	...	...	...	8	1	9	·03	·00	·02	·06	25
11	...	...	...	...	...	7	4	11	·02	·01	·02	·03	26
31	...	...	...	...	...	73	39	112	·26	·17	·22	·04	27
...	...	...	...	...	...	...	...	...	...	...	...	·01	28
4,313	4,712	1,227	596	98	74	13,761	12,392	26,153	1·37	1·36	1·36	·21	



## ANNUAL FORM NO. VIII.—DEATHS registered from SMALL-POX in the

1	2	3		4		5					
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.		January.	February.	March.	April.	May.	June.
		Number in each District.	Number from which deaths from Small-pox were reported.	Number in each District.	Number from which deaths from Small-pox were reported.						
	<i>Western Registration District</i>										
1	East Khándesh ...	23	20	1,478	189	33	64	122	143	130	81
2	West Khándesh ...	10	7	1,242	21	...	5	4	13	8	11
3	Násik ...	19	15	1,667	143	37	63	72	85	71	47
4	Thána ...	15	12	1,546	23	...	3	5	16	19	11
5	Bombay Suburban ...	5	3	80	13	11	2	19	12	2	...
6	Kolába ...	13	11	1,432	18	...	1	4	4	7	...
7	Bombay City ...	1	1	1	1	55	82	183	179	152	99
	<i>Central Registration District</i>										
8	Ahmednagar ...	15	13	1,346	74	1	12	20	12	21	14
9	Poona ...	20	18	1,157	67	32	69	139	123	74	55
10	Sholápur ...	10	7	718	14	3	4	5	5	5	10
11	Sátára ...	19	16	1,342	97	25	30	40	54	31	28
12	Ratnágiri ...	15	14	1,305	105	15	30	34	39	45	44
	<i>Southern Registration District</i>										
13	Belgaum ...	15	12	1,069	90	22	17	30	48	35	23
14	Dhárwar ...	18	6	1,277	12	3	3	3	4	3	3
15	Bijápur ...	13	7	1,128	13	...	...	1	6	5	1
16	Kánara ...	16	4	1,264	8	...	1	...	1	2	...
	<i>Gujarát Registration District</i>										
17	Surat ...	12	12	782	73	159	204	217	102	70	32
18	Broach ...	9	6	404	11	1	3	13	10	7	8
19	Kaira ...	15	3	579	3	...	...	...	1	...	2
20	Panch Maháls ...	7	6	668	14	1	2	4	4	3	...
21	Ahmedabad ...	13	6	871	13	7	...	3	4	7	2
	<i>Sind Registration District</i>										
22	Karáchi ...	16	5	793	9	19	6	...	3	7	1
23	Hyderabad ...	11	6	862	7	9	10	6	2	1	1
24	Thar and Párkár ...	13	7	904	24	7	5	15	5	7	3
25	Nawábsháh ...	9	8	731	35	8	20	11	11	32	8
26	Lárkána ...	15	7	763	14	3	12	17	11	2	1
27	Sukkur ...	12	2	671	4	16	...	...	...	...	2
28	Upper Sind Frontier ...	6	1	410	1	...	...	...	...	...	...
	Total for the Presidency.	365	235	26,546	1,101	470	618	972	897	746	492

N.B.—Small-pox should not include Measles, Chicken-Pox, etc.

## DISTRICTS of the BOMBAY PRESIDENCY during each month of the year 1927

July.	August.	September.	October.	November.	December.	6			7		8			9	10
						TOTAL.			NUMBER OF THESE DEATHS AMONG CHILDREN.		RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 of previous five years.	No.
						Male.	Female.	Total.	Under 1 year.	Under 10 years.	Male.	Female.	Total.		
44	25	11	4	1	4	312	350	662	232	355	·59	·66	·61	·44	1
10	5	...	...	1	...	37	20	57	24	33	·12	·07	·09	·69	2
27	21	6	3	1	27	228	232	460	159	248	·54	·57	·56	·32	3
10	1	2	...	4	4	39	35	75	25	40	·10	·10	·10	·26	4
4	...	...	...	1	...	28	23	51	2	30	·32	·36	·34	·15	5
...	6	...	3	4	2	18	13	31	5	22	·03	·05	·05	·34	6
50	17	5	6	3	5	458	383	841	151	330	·61	·97	·73	·49	7
16	24	8	4	4	23	88	71	159	26	33	·24	·19	·22	·08	8
37	18	12	7	3	5	295	279	574	195	314	·59	·56	·58	·31	9
3	4	1	4	...	7	33	18	51	7	20	·09	·05	·07	·25	10
25	4	5	2	8	23	139	136	275	81	124	·27	·26	·27	·10	11
40	9	10	8	9	22	138	167	305	51	142	·26	·27	·26	·27	12
19	13	15	5	11	19	120	142	262	72	93	·25	·31	·23	·10	13
1	1	4	3	...	1	11	18	29	9	11	·02	·04	·03	·07	14
...	...	1	...	2	4	10	10	20	5	11	·02	·03	·03	·08	15
...	2	...	4	1	2	8	5	13	4	5	·04	·03	·03	·30	16
8	...	1	...	..	3	378	418	796	319	391	1·12	1·24	1·18	·40	17
1	1	...	...	...	...	15	29	44	18	20	·04	·08	·06	·26	18
1	...	...	...	...	...	...	4	4	...	3	·00	·01	·01	·11	19
4	2	..	...	...	...	12	8	20	2	10	·06	·04	·05	·09	20
3	...	...	...	...	...	19	7	26	6	8	·04	·02	·03	·29	21
...	4	...	...	5	7	29	23	52	5	12	·09	·10	·09	·36	22
1	...	...	3	1	1	15	20	35	3	17	·05	·07	·06	·20	23
4	...	...	...	...	2	25	23	48	5	11	·11	·13	·12	·30	24
1	...	...	6	1	1	66	33	99	20	39	·28	·17	·23	·16	25
7	...	...	...	4	22	40	42	82	21	38	·12	·16	·14	·18	26
1	...	...	...	...	...	12	7	19	4	8	·04	·03	·04	·19	27
1	...	...	...	...	...	...	1	1	...	...	...	·01	·00	·07	28
318	157	81	62	64	184	2,573	2,518	5,091	1,451	2,368	·26	·28	·27	·26	



## ANNUAL FORM No. IX.—DEATHS registered from FEVERS in the

1	2	3		4		5					
No.	Districts.	CIRCLES OF REGISTRA- TION.		VILLAGES.		January.	February.	March.	April.	May.	June.
		Number in each District.	Number from which deaths from fevers were reported.	Number in each District.	Number from which deaths from fevers were reported.						
	<i>Western Registra- tion District.</i>										
1	East Khándesh ...	23	23	1,478	1,290	912	895	1,224	1,503	1,310	817
2	West Khándesh ...	10	10	1,242	1,006	556	416	482	544	556	356
3	Násik ... ..	19	18	1,667	1,437	807	632	677	1,054	900	677
4	Thána ... ..	15	15	1,546	1,231	716	559	602	606	453	376
5	Bombay Suburban.	5	4	86	63	64	54	53	50	21	25
6	Kolába ... ..	13	13	1,482	1,178	532	523	478	438	412	304
7	Bombay City ...	1	1	1	1	223	226	232	211	214	147
	<i>Central Registration District.</i>										
8	Ahmednagar ...	15	15	1,346	951	245	248	353	463	499	320
9	Poona ... ..	20	20	1,157	855	669	686	891	1,023	916	815
10	Sholápur ... ..	10	10	718	682	507	572	643	781	745	714
11	Sátára ... ..	19	19	1,342	1,224	825	661	896	1,161	1,068	860
12	Ratnágiri ... ..	15	15	1,305	1,129	825	630	798	832	639	562
	<i>Southern Registra- tion District.</i>										
13	Belgaum ... ..	15	15	1,069	949	461	473	587	783	596	540
14	Dhárwár ... ..	18	18	1,277	1,132	873	816	936	868	628	523
15	Bijápur ... ..	13	13	1,128	1,005	626	578	603	790	699	579
16	Kánara ... ..	16	16	1,264	936	476	403	342	294	242	306
	<i>Gujarát Registra- tion District.</i>										
17	Surat ... ..	12	12	782	643	598	485	514	483	417	350
18	Broach ... ..	9	9	404	381	315	200	258	214	233	181
19	Kaira ... ..	15	15	579	554	448	376	427	387	376	337
20	Panch Maháls ...	7	7	668	609	327	275	355	295	280	227
21	Ahmedabad ...	13	13	871	846	964	843	909	875	755	660
	<i>Sind Registration District.</i>										
22	Karáchi ... ..	16	16	793	793	647	479	455	312	314	284
23	Hyderabad ...	11	11	862	862	838	721	540	404	378	310
24	Thar and Párkar...	13	13	904	904	923	744	641	536	493	389
25	Nawabshah ...	9	9	731	731	833	737	505	354	353	317
26	Lárkána ... ..	15	15	763	763	1,076	705	633	571	521	422
27	Sukkur ... ..	12	12	671	671	655	477	484	486	423	365
28	Upper Sind Frontier	6	6	410	410	270	206	215	149	163	139
	Total for the Pre- sidency ...	365	363	26,546	23,286	17,211	14,670	15,733	16,557	14,609	11,902

## DISTRICTS of the BOMBAY PRESIDENCY during each month of the year 1927

July.	August.	September.	October.	November.	December.	6			7			8	9
						TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 of previous five years.	No.
						Male.	Female.	Total.	Male.	Female.	Total.		
959	1,702	1,584	1,230	1,167	865	7,004	7,164	14,168	12·84	13·51	13·18	13·37	1
432	615	620	531	754	576	3,113	3,325	6,438	10·06	10·97	10·51	12·70	2
604	880	753	804	925	857	4,821	4,779	9,600	11·51	11·75	11·63	11·93	3
313	465	415	488	827	721	3,342	3,229	6,571	8·61	8·76	8·68	13·88	4
34	47	33	32	60	58	272	259	531	3·10	4·05	3·50	8·29	5
318	307	400	365	370	417	2,387	2,537	4,924	8·54	8·96	8·76	13·91	6
182	256	208	180	206	200	1,320	1,165	2,485	1·76	2·94	2·16	3·21	7
447	549	412	397	373	287	2,441	2,152	4,593	6·69	5·96	6·35	7·21	8
912	898	758	748	788	797	5,323	4,878	9,901	10·63	9·40	10·02	10·76	9
988	913	669	597	565	645	4,342	3,997	8,339	11·36	11·13	11·24	12·71	10
1,051	974	910	911	849	892	5,793	5,295	11,088	11·33	10·29	10·81	10·30	11
548	545	662	663	642	675	3,856	4,245	8,101	7·34	6·75	7·02	7·75	12
528	483	433	460	486	574	3,213	3,196	6,409	6·63	6·87	6·75	6·60	13
541	504	529	742	1,067	1,397	4,654	4,770	9,424	8·81	9·38	9·09	10·16	14
725	615	592	622	563	551	3,769	3,774	7,543	9·30	9·65	9·47	10·73	15
367	366	397	451	438	515	2,180	2,407	4,587	10·69	12·18	11·43	11·05	16
373	434	415	457	440	479	2,588	2,757	5,445	7·97	8·18	8·08	8·64	17
242	333	343	436	504	376	1,761	1,904	3,665	11·11	12·77	11·91	14·06	18
362	429	615	909	1,085	676	3,261	3,166	6,427	8·59	9·56	9·04	9·30	19
234	354	452	588	767	627	2,388	2,393	4,781	12·35	13·39	12·76	11·91	20
652	884	1,379	1,672	2,099	1,510	6,662	6,540	13,202	14·07	15·79	14·97	13·26	21
193	285	365	414	579	529	2,680	2,176	4,856	8·85	9·54	9·15	7·88	22
258	250	337	456	540	599	3,193	2,438	5,631	10·07	9·73	9·93	10·42	23
267	247	344	487	644	527	3,403	2,844	6,247	15·39	16·23	15·77	13·43	24
266	228	303	467	485	562	3,083	2,327	5,410	13·18	12·58	12·92	12·56	25
421	427	441	612	1,032	871	4,278	3,484	7,762	12·91	13·06	12·98	12·57	26
370	375	438	533	608	608	3,252	2,570	5,822	11·55	11·28	11·44	14·86	27
152	124	191	272	406	306	1,398	1,195	2,593	10·41	11·24	10·78	11·55	28
12,799	14,489	15,023	16,554	19,269	17,727	95,877	90,666	186,543	9·54	9·94	9·73	10·59	



ANNUAL FORM NO. X.—DEATHS *registered from* DYSENTERY  
during each month

1	2	3		4		5					
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.		January.	February.	March.	April.	May.	June.
		Number in each District.	Number from which deaths from Dysentery and Diarrhoea were reported.	Number in each District.	Number from which deaths from Dysentery and Diarrhoea were reported.						
	<i>Western Registration District.</i>										
1	East Khándesh ...	23	23	1,478	447	148	114	127	116	87	88
2	West Khándesh ...	10	10	1,242	227	39	19	34	28	40	30
3	Násik ... ..	19	19	1,667	400	78	73	75	74	81	73
4	Thána ... ..	15	15	1,546	237	52	31	37	32	29	28
5	Bombay Suburban ...	5	4	86	45	36	20	19	18	20	15
6	Kolába... ..	13	13	1,482	347	61	53	51	46	34	46
7	Bombay City ... ..	1	1	1	1	139	128	101	103	73	97
	<i>Central Registration District.</i>										
8	Ahmednagar ... ..	15	15	1,346	641	93	68	104	118	178	187
9	Poona ... ..	20	20	1,157	480	102	108	106	120	154	164
10	Sholápur ... ..	10	10	718	423	81	74	49	74	106	131
11	Sátára ... ..	19	19	1,342	619	119	88	96	136	123	206
12	Ratnágiri ... ..	15	15	1,305	403	235	128	107	80	65	67
	<i>Southern Registration District.</i>										
13	Belgaum ... ..	15	15	1,069	611	144	121	198	226	195	273
14	Dhárwár ... ..	18	18	1,277	298	66	60	111	87	62	60
15	Bijápur ... ..	13	12	1,123	393	54	53	64	77	39	100
16	Kánara ... ..	16	16	1,234	290	94	57	60	50	47	73
	<i>Gujarát Registration District.</i>										
17	Surat ... ..	12	12	782	139	36	26	27	29	63	58
18	Broach... ..	9	9	404	89	9	16	8	10	16	14
19	Kaira ... ..	15	15	579	229	46	21	42	30	36	50
20	Panch Maháls ...	7	7	668	92	17	20	16	11	17	14
21	Ahmedabad ... ..	13	13	871	132	53	43	54	39	42	35
	<i>Sind Registration District.</i>										
22	Karáchi ... ..	16	11	793	11	16	12	13	21	29	19
23	Hyderabad ... ..	11	9	362	9	15	11	8	5	11	6
24	Thar and Párkar ...	13	13	904	13	15	4	5	4	5	...
25	Nawabshah ... ..	9	6	731	8	2	1	3	...	...	...
26	Lárkána ... ..	15	7	763	7	...	2	2	2	...	2
27	Sukkur... ..	12	10	671	10	7	3	3	5	8	3
28	Upper Sind Frontier	6	2	410	3	...	...	...	...	1	1
	Total for the Presidency. ...	365	339	26,546	6,619	1,757	1,354	1,520	1,541	1,566	1,840

*and* DIARRHŒA in the DISTRICTS of the BOMBAY PRESIDENCY  
of the year 1927

									7			8	9
						TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 of previous five years.	No.
July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.		
217	536	307	150	96	91	1,003	1,074	2,077	1·84	2·03	1·93	1·49	1
72	124	98	52	28	31	323	272	595	1·04	·90	·97	·60	2
171	239	194	121	109	76	732	632	1,364	1·75	1·55	1·65	1·21	3
39	67	44	27	35	48	239	220	469	·62	·62	·62	·45	4
16	19	32	20	14	28	146	111	257	1·67	1·74	1·70	1·32	5
80	129	95	75	52	79	431	361	792	1·54	1·28	1·41	·84	6
203	196	133	103	91	85	877	575	1,452	1·17	1·45	1·26	2·65	7
329	401	232	156	152	128	1,162	1,034	2,196	3·20	2·96	3·03	2·69	8
312	293	211	134	93	125	1,082	840	1,922	2·00	1·68	1·95	1·92	9
304	329	239	182	151	86	952	854	1,806	2·49	2·38	2·43	2·41	10
416	413	205	262	146	106	1,226	1,195	2,421	2·39	2·32	2·36	1·90	11
96	103	73	45	103	119	636	585	1,221	1·21	·93	1·06	·87	12
318	268	249	247	203	159	1,294	1,307	2,601	2·67	2·81	2·74	2·75	13
72	86	77	77	65	71	464	450	894	·88	·85	·86	·98	14
193	178	144	124	102	60	582	606	1,188	1·44	1·55	1·49	1·79	15
147	152	125	82	69	84	571	469	1,040	2·80	2·37	2·59	2·46	16
56	94	51	35	41	34	280	270	550	·83	·80	·82	1·02	17
17	23	35	12	15	4	100	79	179	·63	·53	·58	·79	18
41	81	105	151	120	89	440	372	812	1·16	1·12	1·14	1·08	19
29	21	26	14	13	7	105	100	205	·54	·55	·55	·55	20
45	89	98	73	60	57	383	305	688	·81	·74	·77	·93	21
26	75	141	63	19	23	253	204	457	·83	·89	·86	·50	22
5	13	6	1	7	17	65	40	105	·20	·15	·19	·21	23
2	5	7	3	2	3	28	27	55	·13	·15	·14	·10	24
3	1	1	4	...	1	15	1	16	·06	·00	·04	·03	25
1	3	...	1	3	4	12	8	20	·04	·03	·03	·19	26
1	3	9	10	6	4	37	25	62	·13	·11	·12	·34	27
...	...	...	1	...	...	2	1	3	·01	·01	·01	·18	28
3,211	3,932	3,087	2,225	1,795	1,619	13,440	12,007	25,447	1·34	1·32	1·33	1·33	



ANNUAL FORM No. XI.—DEATHS registered from RESPIRATORY  
month of the

1 No.	2 Districts.	3 CIRCLES OF REGISTRA- TION.		4 VILLAGES.		5					
		Number in District.	Number from which Deaths from Respiratory Diseases were reported.	Number in District.	Number from which Deaths from Respiratory Diseases were reported.	January.	February.	March.	April.	May.	June.
1	<i>Western Registration District.</i> East Khândesh ...	23	23	1,478	889	444	357	439	330	268	204
2	West Khândesh ...	10	10	1,242	588	204	166	183	162	135	99
3	Násik ...	19	19	1,667	911	373	317	373	406	313	224
4	Thána ...	15	15	1,546	868	299	268	278	228	211	147
5	Bombay Suburban ...	5	5	86	60	68	56	65	65	47	32
6	Kolába ...	13	13	1,482	868	278	233	236	229	192	158
7	Bombay City ...	1	1	1	1	966	989	1,164	1,037	939	862
8	<i>Central Registration District.</i> Ahmednagar ...	15	15	1,346	947	318	290	296	301	307	233
9	Poona ...	20	20	1,157	753	470	476	510	502	496	415
10	Sholápur ...	10	10	718	443	247	234	147	192	193	166
11	Sátára ...	19	19	1,342	618	236	231	235	225	216	185
12	Ratnágiri ...	15	15	1,305	1,032	534	505	544	514	447	405
13	<i>Southern Registration District.</i> Belgaum ...	15	15	1,069	697	295	273	293	353	271	262
14	Dhárwár ...	18	18	1,277	681	345	310	280	277	198	215
15	Bijápur ...	13	13	1,128	603	208	193	183	236	180	162
16	Kánara ...	16	16	1,264	386	69	124	109	86	64	50
17	<i>Gujarat Registration District.</i> Sarat ...	12	12	782	675	689	639	678	525	491	385
18	Broach ...	9	9	404	314	227	192	212	199	202	132
19	Kaira ...	15	15	579	539	524	457	509	564	428	367
20	Panch Maháls ...	7	7	668	331	114	79	133	86	76	52
21	Ahmedabad ...	13	13	871	521	602	563	661	598	488	396
22	<i>Sind Registration District.</i> Karáchi ...	16	15	793	115	391	282	254	140	122	120
23	Hyderabad ...	11	11	862	146	296	251	230	140	77	52
24	Thar and Párkar ...	13	13	904	269	197	233	181	73	38	41
25	Nawábshah ...	9	9	731	98	73	76	54	32	20	18
26	Lárkána ...	15	13	763	21	59	35	36	14	10	12
27	Sukkur ...	12	12	671	23	54	56	39	14	22	15
28	Upper Frontier. Sind	6	6	410	9	7	10	3	...	...	...
Total for the Presidency.		365	362	26,546	13,406	8,537	7,900	8,325	7,578	6,454	5,409

DISEASES *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each*  
*year 1927.*

July.	August.	September.	October.	November.	December.	6			7			8	9
						TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 of pre- vious five years.	No.
						Male.	Female.	Total.	Male.	Female.	Total.		
241	352	330	334	379	361	2,243	1,846	4,089	4.11	3.48	3.80	3.66	1
99	135	160	153	217	225	1,021	917	1,938	3.30	3.02	3.16	3.23	2
277	335	337	336	405	353	2,132	1,917	4,049	5.09	4.71	4.91	4.36	3
140	206	217	221	272	285	1,566	1,206	2,772	4.03	3.27	3.66	2.14	4
60	56	45	54	54	55	395	262	657	4.51	4.10	4.34	2.48	5
178	191	262	256	236	255	1,504	1,200	2,704	5.38	4.24	4.81	3.03	6
941	1,030	855	838	888	905	6,504	4,960	11,464	8.65	12.50	9.98	12.63	7
312	409	345	340	319	341	1,927	1,884	3,811	5.31	5.22	5.26	5.52	8
468	523	512	529	500	557	3,007	2,951	5,958	6.20	6.05	6.03	6.02	9
242	206	185	231	230	243	1,233	1,281	2,519	3.24	3.56	3.40	3.14	10
251	220	254	277	260	241	1,424	1,407	2,831	2.78	2.73	2.76	2.06	11
410	419	488	521	473	498	3,078	2,710	5,788	5.79	4.31	5.02	4.29	12
287	309	278	304	296	298	1,840	1,679	3,519	3.80	3.61	3.71	3.34	13
209	275	243	289	308	201	1,674	1,576	3,250	3.17	3.10	3.14	3.37	14
220	204	194	211	207	199	1,276	1,121	2,397	3.15	2.87	3.01	3.48	15
82	104	90	99	99	129	656	449	1,105	3.22	2.27	2.75	2.08	16
405	487	422	425	617	613	3,483	3,893	6,376	10.33	8.59	9.46	10.70	17
159	183	193	267	257	240	1,299	1,104	2,403	8.19	7.40	7.81	9.38	18
369	507	706	875	929	631	3,662	3,204	6,866	9.64	9.67	9.66	9.21	19
56	89	73	66	115	105	600	384	1,014	3.41	2.12	2.79	2.96	20
370	518	585	612	621	673	3,690	3,027	6,717	7.79	7.31	7.56	8.52	21
122	289	219	120	200	283	1,501	1,041	2,542	4.96	4.56	4.79	3.91	22
51	59	54	6	20	129	819	546	1,365	2.58	2.18	2.41	2.42	23
16	19	12	24	18	59	563	353	916	2.55	2.01	2.31	.22	24
4	7	7	10	9	24	222	112	334	.95	.61	.80	.77	25
8	13	11	10	17	11	151	85	236	.45	.32	.40	.09	26
11	7	13	12	14	30	209	78	287	.74	.34	.56	.25	27
...	...	3	1	1	1	18	8	26	.13	.07	.11	.08	28
6,018	7,182	7,093	7,411	7,961	8,045	47,762	40,201	87,963	4.75	4.41	4.59	4.63	



## ANNUAL FORM No. XII.—DEATHS registered from PLAGUE in the

1	2	3		4		5					
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.		January.	February.	March.	April.	May.	June.
		Number in each District.	Number from which deaths from Plague were reported.	Number in each District.	Number from which deaths from Plague were reported.						
	<i>Western Registration District.</i>										
1	East Khándesh ...	23	1	1,478	1	...	...	1	...	...	...
2	West Khándesh ...	10	...	1,242	...	...	...	...	...	...	...
3	Násik ...	19	...	1,167	...	...	...	...	...	...	...
4	Thána ...	15	3	1,546	3	3	4	1	1	5	...
5	Bombay Suburban ...	5	3	86	4	...	3	8	3	5	5
6	Kolába ...	13	7	1,482	14	14	19	52	13	...	...
7	Bombay City ...	1	1	1	1	2	8	17	54	73	19
	<i>Central Registration District.</i>										
8	Ahmednagar ...	15	2	1,346	5	22	12	1	...	...	...
9	Poona ...	20	...	1,157	...	...	...	...	...	...	...
10	Sholápur ...	10	4	718	4	1	15	36	2	...	...
11	Sátára ...	19	7	1,342	41	64	30	19	1	...	...
12	Ratnágiri ...	15	2	1,305	2	...	...	...	...	...	...
	<i>Southern Registration District.</i>										
13	Belgaum ...	15	9	1,069	50	47	33	19	23	15	17
14	Dhárwár ...	18	17	1,277	110	102	80	55	22	23	20
15	Bijápur ...	13	9	1,128	26	91	64	10	5	...	6
16	Kánara ...	16	5	1,264	16	18	34	39	21	2	25
	<i>Gujarát Registration District.</i>										
17	Surat ...	12	2	782	6	...	...	...	...	...	...
18	Broach ...	9	...	404	...	...	...	...	...	...	...
19	Kaira ...	15	...	579	...	...	...	...	...	...	...
20	Panch Maháls ...	7	...	668	...	...	...	...	...	...	...
21	Ahmedabad ...	13	...	871	...	...	...	...	...	...	...
	<i>Sind Registration District.</i>										
22	Karáchi ...	16	...	793	...	...	...	...	...	...	...
23	Hyderabad ...	11	...	862	...	...	...	...	...	...	...
24	Thar and Párkar ...	13	...	904	...	...	...	...	...	...	...
25	Nawábshah ...	9	...	731	...	...	...	...	...	...	...
26	Lárkána ...	15	...	763	...	...	...	...	...	...	...
27	Sukkur ...	12	1	671	1	...	...	1	...	...	...
28	Upper Sind Frontier.	6	...	410	...	...	...	...	...	...	...
	Total for the Presidency ...	365	73	26,546	284	364	302	259	145	123	92

## DISTRICTS of the BOMBAY PRESIDENCY during each month of the year 1927.

						6			7			8	9
July.	August.	September.	October.	November.	December.	TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 of previous five years.	No.
						Male.	Female.	Total.	Male.	Female.	Total.		
...	...	...	...	...	...	1	...	1	·00	...	·00	1·74	1
...	...	...	...	...	...	...	...	...	...	...	...	·03	2
...	...	...	...	...	...	...	...	...	...	...	...	·01	3
...	...	4	...	...	...	13	5	18	·03	·01	·02	·27	4
3	3	1	...	...	...	19	12	31	·22	·19	·20	·36	5
1	13	..	...	1	8	65	56	121	·23	·20	·22	·12	6
16	9	4	4	...	1	152	55	207	·20	·14	·18	·45	7
...	...	...	...	...	...	14	21	35	·04	·06	·05	·14	8
...	...	...	...	...	...	...	...	...	...	...	...	·73	9
...	...	...	1	1	1	25	32	57	·07	·09	·08	1·33	10
...	2	103	230	118	87	324	360	684	·63	·70	·67	3·05	11
...	...	...	1	3	2	5	1	6	·01	·00	·00	·22	12
11	77	71	109	78	69	282	237	569	·58	·62	·60	2·22	13
75	175	239	391	203	209	733	858	1,594	1·39	1·69	1·54	3·59	14
19	16	45	88	30	31	164	241	405	·40	·60	·51	·06	15
24	22	26	4	20	28	145	154	299	·71	·78	·74	·31	16
5	1	3	1	2	25	25	23	48	·07	·07	·07	·05	17
...	...	...	...	...	...	...	...	...	...	...	...	...	18
...	...	...	...	...	...	...	...	...	...	...	...	...	19
...	...	...	...	...	...	...	...	...	...	...	...	...	20
...	...	...	...	...	...	...	...	...	...	...	...	...	21
...	...	...	...	...	...	...	...	...	...	...	...	·51	22
...	...	...	...	...	...	...	...	...	...	...	...	...	23
...	...	...	...	...	...	...	...	...	...	...	...	...	24
...	...	...	...	...	...	...	...	...	...	...	...	·03	25
...	...	...	...	...	...	...	...	...	...	...	...	...	26
...	...	...	...	...	...	1	...	1	·00	...	·00	...	27
...	...	...	...	...	...	...	...	...	...	...	...	...	28
154	318	496	906	456	461	1,971	2,105	4,076	·19	·23	·21	·77	









